THE

London *and* Country BREWER.

CONTAINING

The WHOLE ART of BREWING all SORTS OF

MALT-LIQUORS,

As practiſed both in TOWN and COUNTRY; according to OBSERVATIONS made by the AUTHOR in FOUR YEARS TRAVELS through the ſeveral COUNTIES in ENGLAND.

ALSO,

The METHOD of preſerving LIQUORS in the CASK, and DIRECTIONS to be obſerved in BOTTLING them.

In THREE PARTS.

To which is added,

A

SUPPLEMENT.

By a Perſon formerly concerned in a PUBLICK BREWHOUSE in *London*.

The SIXTH EDITION.

LONDON:

Printed for T. ASTLEY;

And Sold by R. BALDWIN, jun. at the *Roſe* in *Pater-Noſter-Row*. MDCCL.

BRITISH MUSEUM

THE London *and* Country BREWER.

Containing an Account,

I. Of the NATURE of the BARLEY-CORN, and of the proper SOILS and MANURES for the IMPROVEMENT thereof.
II. Of making GOOD MALTS.
III. To know GOOD from BAD MALTS.
IV. Of the USE of the PALE, AMBER, and BROWN MALTS.
V. Of the NATURE of ſeveral WATERS, and their USE in BREWING.
VI. Of GRINDING MALTS.
VII. Of BREWING in general.
VIII. Of the LONDON METHOD of Brewing STOUT, BUTT-BEER, PALE, and BROWN ALES.
IX. Of the COUNTRY or PRIVATE WAY of BREWING.
X. Of the NATURE and USE of the HOP.
XI. Of BOILING MALT-LIQUORS, and to Brew a Quantity of Drink in a little Room, and with a few Tubs.
XII. Of FOXING or TAINTING of MALT-LIQUORS; their PREVENTION and CURE.
XIII. Of FERMENTING and WORKING of BEERS and ALES, and the unwholeſome PRACTICE of BEATING in the YEAST, detected.
XIV. Of ſeveral ARTIFICIAL LEES for FEEDING, FINING, PRESERVING, and RELISHING MALT-LIQUORS.
XV. Of ſeveral PERNICIOUS INGREDIENTS put into MALT-LIQUORS to increaſe their STRENGTH.
XVI. Of the CELLAR or VAULT for keeping BEERS and ALES.
XVII. Of SWEETENING and CLEANING CASKS.
XVIII. Of BUNGING CASKS and CARRYING them to ſome DISTANCE.
XIX. Of the AGE and STRENGTH of MALT-LIQUORS.
XX. Of the PROFIT and PLEASURE of PRIVATE BREWING, and the CHARGE of BUYING MALT-LIQUORS.

To which is added,

A PHILOSOPHICAL ACCOUNT of Brewing Strong OCTOBER BEER.

By a Perſon formerly concerned in a Publick Brewhouſe in London, *but for Twenty Years paſt has reſided in the Country.*

PART I.

LONDON:
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BRITISH MUSEUM

THE PREFACE.

THE many Inhabitants of Cities and Towns, as well as Travellers, that have for a long Time ſuffered great Prejudices from unwholeſome and unpleaſant Beers and Ales, by the Badneſs of Malts, Under-boiling the Worts, Mixing injurious Ingredients, the Unſkilfulneſs of the Brewers, and the great Expence that Families have been at, in buying them clogged with a heavy Exciſe, has moved me to undertake the Writing of this Treatiſe on Brewing; wherein I have endeavour'd to ſet, in a true Light, the many Advantages of Body and Purſe that may ariſe from a due Knowledge and Management in Brewing Malt-Liquors, which are of the greateſt Importance, as they are in a conſiderable Degree our Nouriſhment, and the common Diluters of our Food; ſo that on their Goodneſs depends very much the Health and Longævity of the Body.

This bad Œconomy, in Brewing, has brought our Malt-Liquors into ſuch Diſrepute, that many have been conſtrained, either to be at an Expence for better Drinks than their Pockets could afford, or to take up with Toaſt and Water, to avoid the too juſtly apprehended ill Conſequences of drinking ſuch Ales and Beers.

Wherefore I have given an Account of brewing Beers and Ales after ſeveral Methods; and alſo ſeveral curious Receipts for feeding, fining, and preſerving Malt-Liquors, that are moſt of them wholeſomer than the Malt itſelf, and ſo cheap, that none can object againſt the Charge; which I thought was the ready Way to ſupplant the Uſe of

thoſe unwholeſome Ingredients, that have been made too free with by ſome ill principled People, merely for their own Profit, though at the Expence of the Drinker's Health.

I hope I have adjuſted that long wanted Method of giving a due Standard both to the Hop and Wort, which never was (as I know of) rightly aſcertained in Print before; tho' the Want of it, I am perſuaded, has been partly the Occaſion of the Scarcity of good Drinks, as is at this Time very evident in moſt Places of the Nation. I have here alſo divulged the Noſtrum of the Artiſt Brewer, that he has ſo long valued himſelf upon, in making a right Judgment when the Worts are boiled to a true Criſis; a Matter of conſiderable Conſequence, becauſe all ſtrong Worts may be boiled too much, or too little, to the great Loſs of the Owner; and without this Knowledge a Brewer muſt go on by Gueſs; which is a Hazard that every one ought to be free from that can; and therefore, I have endeavoured to explode the old Hour-glaſs Way of Brewing, by Reaſon of the ſeveral Uncertainties that attend ſuch Methods, and the Hazard of ſpoiling both Malt and Drink; for, in ſhort, where a Brewing is performed by Ladings over of ſcalding Water, there is no Occaſion for the Watch or Hour-glaſs to boil the Wort by, which is beſt known by the Eye, as I have, both in this, and my Second Book, made appear.

I have here obſerved that neceſſary Caution, which is perfectly requiſite, in the Choice of good, and the Management of bad Waters; a Matter of high Importance, as the Uſe of this Vehicle is unavoidable in Brewing, and therefore requires a ſtrict Inſpection into its Nature; and this I have been the more particular in, becauſe I am ſenſible of the great Quantities of unwholeſome Waters, uſed not only by Neceſſity, but by a miſtaken Choice.

So alſo, I have confuted the old received Opinion, lately publiſhed by an eminent Hand, that long Maſhings are the beſt Methods in Brewing; an Error of dangerous Conſequence to all thoſe who brew by Ladings over of the hot Water on the Malt.

The

The PREFACE.

The great Difficulty, and what has hitherto proved an Impediment and Diſcouragement to many from Brewing their own Drinks, I think, I have in ſome Meaſure removed, and made it plainly appear, how a Quantity of Malt-Liquor may be brewed in a little Room, and in the hotteſt Weather, without the leaſt Damage by Foxing or other Taint.

The Benefit of Brewing intire Guile Small Beer from freſh Malt, and the ill Effects of that made from Goods after ſtrong Beer or Ale, I have here expoſed; for the Sake of the Health and Pleaſure of thoſe that may eaſily prove their Advantage, by drinking of the former, and refuſing the latter.

By the Time the following Treatiſe is read over, and thoroughly conſidered, I doubt not, but an ordinary Capacity will be in ſome Degree a better Judge of good and bad Malt-Liquors as a Drinker, and have ſuch a Knowledge in Brewing, that formerly he was a Stranger to; and therefore I am in great Hopes, theſe my Efforts will be one principal Cauſe of the reforming our Malt-Liquors in moſt Places; and that more Private Families, than ever, will come into the delightful and profitable Practice of Brewing their own Drinks, and, thereby, not only ſave almoſt half in half of Expence, but enjoy ſuch as has paſſed thro' its regular Digeſtions, and is truly pleaſant, fine, ſtrong, and healthful.

I queſtion not, but this Book will meet with ſome Sceptics, who are either prejudiced againſt the Introduction of new Improvements, or that their Intereſt will be hereby eclipſed in Time; to ſuch, I ſay, I do not write, becauſe I have little Hopes to reform a wrong Practice in them by Reaſon and Argument. But thoſe, who are above Prejudice, may eaſily judge of the great Benefits that will accrue by the following Methods, wherein I have amply ſet forth, how to brew without boiling Water or Wort, and ſeveral other Ways, that will be of conſiderable Service to the World.

To all COUNTRY-GENTLEMEN, FARMERS, GRAZIERS, and SHEEP-DEALERS; the following uſeful Work is

Juſt Publiſhed,

(Price Five Shillings bound in Calf)

A

COMPLEAT SYSTEM

OF

Experienced Improvements,

MADE ON

SHEEP, GRASS-LAMBS, and HOUSE-LAMBS:

OR,

The COUNTRY GENTLEMAN's, *the* FARMER's, *the* GRASIER's, *the* SHEEP-DEALER's,

AND

The Shepherd's SURE GUIDE:

SHEWING,

I. How the beſt of SHEEP may be bred.

II. How to preſerve them from Surfeits, Scabs, Wood-Evil, White and Red-Water, the Rot, and all other Diſtempers.

III. How to cure SHEEP when wounded or diſeaſed, particularly when they have the White or Red-Water, and even the Rot, if an early Application is made uſe of as directed; and this by ſuch cheap and ready Remedies, that the pooreſt Farmer muſt be induced to uſe them, ſo that there need not be a rotten SHEEP, or LAMB, in the Nation.

IV. How to preſerve SHEEP from Hoving, or Sickening, to fat them in the quickeſt and cheapeſt Manner, and to cauſe them to have a ſweet Fleſh, while they are fatting on Turnips, or Rapes, contrary to the Nature of thoſe rank Plants.

V. How to make an hundred EWES take RAM in an Hour's Time, either by artificial, or by natural Means, at any Time of the Year.

VI. How to ſecure LAMBS from being killed by Foxes.

VII. How to make the moſt Profit of rotten SHEEPS Carcaſſes, or thoſe that die by Accident.

VIII. How to teach DOGS ſix ſeveral Sorts of Diſcipline, for making them ſerviceable to Shepherds and others.

IX. MANY Impoſitions expoſed relating to SHEEP and LAMBS.

X. THE neweſt Methods of ſuckling HOUSE-LAMBS, in the greateſt Perfection.

With many other curious and ſerviceable Matters.

A Work different from all others ever yet publiſhed, as it is explained and improved by great Numbers of various Caſes that have really happened; whereby the Woollen Manufacture, and Intereſt of *Great-Britain*, may be more highly improved, than ever it was yet done, by keeping all Sorts of SHEEP and LAMBS in the greateſt Health, though they feed all the while on the worſt of mooriſh, or ſwampy Ground; and cauſing them to yield, in the wetteſt Seaſons, a Wool, far exceeding in Goodneſs, that of all Nations whatſoever. In Three Books.

By WILLIAM ELLIS, *a Farmer at* Little Gaddeſden, *in* Hertfordſhire.

Printed for R. BALDWIN, Jun. in *Pater-Noſter-Row*. 1750.

1753
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CHAP. I.

Of the Nature of the Barley-Corn, *and of the proper Soils and Manures for the Improvement thereof.*

THIS Grain is well known to excel all others for making of Malts that produce those fine *British* Liquors, Beer and Ale, which no other Nation can equal; but as this Excellency cannot be obtained unless the several Ingredients are in a perfect State and Order, and these also attended with a right Judgment; I shall treat on their several Particulars, and first of Soils.

THIS Grain I annually sow in my Fields on different Soils, whereby I have brought to my Knowledge several Differences arising therefrom. On our red Clays, this Grain generally comes off reddish at both Ends, and sometimes all over, with a thick Skin and tough Nature, somewhat like the Soil it grows in, and therefore not so valuable as that of contrary Qualities; nor are the black, bluish, marly Clays of the Vale much better, but Loams are, and Gravels better than them, as all the Chalks are better than Gravels; on these two last Soils the Barley acquires a whitish Body, a thin Skin, a short plump Kernel, and a sweet Flour, which occasions those fine, pale and amber Malts made at *Dunstable*, *Tring*, and *Dagnal*, from the Barley that comes off the white and gravelly Grounds about those Places; for it is certain, there is as much Difference in Barley as in Wheat or other Grain, from the Soil it comes off, as appears by the excellent Wheats that grow in the marly vale Earths, Pease in Sands, and Barley in Gravels and Chalks, *&c.* For our Mother Earth, as it is destinated to the Service of Man in the Production of

Vegetables, is compoſed of various Sorts of Soils for different Seeds to grow therein. And ſince Providence has been pleaſed to allow Man this great Privilege for the Imployment of his Skill and Labour to improve the ſame to his Advantage; it certainly behoves us to acquaint ourſelves with its ſeveral Natures, and how to adapt an agreeable Grain and Manure to their natural Soil, as being the very Foundation of enjoying good and bad Malts. This is obvious by parallel Deductions from Turneps ſown on rank, clayey, loamy Grounds, dreſſed with noxious Dungs, that render them bitter, tough, and nauſeous, while thoſe that grow on Gravels, Sands, and chalky Loams, under the Aſſiſtance of the Fold, or Soot, Lime, Aſhes, Hornſhavings, *&c.* are ſweet, ſhort and pleaſant. 'Tis the ſame alſo with Salads, Aſparagus, Cabbages, Garden-beans, and all other culinary Ware, that come off thoſe rich Grounds, glutted with the great Quantities of *London*, and other rank Dungs, which are not near ſo pure, ſweet, and wholeſome, as thoſe produced from Virgin-mould, and other healthy Earths and Manures.

THERE is likewiſe another Reaſon that has brought a Diſreputation on ſome of the *Chiltern* Barley, and that is, the too often ſowing of one and the ſame Piece of Ground, whereby its ſpirituous, nitrous, and ſulphureous Qualities are exhauſted and worn out, by the conſtant Attraction of its beſt Juices for the Nutriment of the Grain: To ſupply which, great Quantities of Dungs are often incorporated with ſuch Earths, whereby they become impregnated with ſour, adulterated, unwholeſome Qualities, that ſo affect the Barley that grows therein, as to render it incapable of making ſuch pure and ſweet Malts, as that which is ſown in the open champaign Fields, whoſe Earths are conſtantly reſted every third Year, called *The Fallow Seaſon*, in order to diſcharge their crude, phlegmatic, and ſour Property, by the ſeveral Turnings that the Plough gives them part of a Winter, and one whole Summer, which expoſes the rough, clotty, looſe Parts of the Ground, and by Degrees

grees brings them into a Condition of making a Lodgment of thoſe ſaline Benefits that ariſe from the Earths, and afterwards fall down, and redound ſo much to the Benefit of all Vegetables that grow therein, as being the Eſſence and Spring of Life to all Things that have root; and though they are firſt exhaled by the Sun, in Vapour from the Earth, as the Spirit and Breath thereof, yet it is returned again in Snows, Hails, Dews, *&c.* more than in Rains, by which the Surface of the Globe is ſaturated; from whence it re-aſcends in the Juices of Vegetables, and enters into all thoſe Productions as Food and Nouriſhment, which the Creation ſupplies.

Here then may appear the Excellency of ſteeping Seed-barley in a Liquor lately invented, that impregnates and loads it with Nitre and other Salts that are the neareſt of all others to the true and original Spirits or Salt of the Earth, and therefore in a great Meaſure ſupplies the Want thereof, both in Incloſures and open Fields; for even in this laſt it is ſometimes very ſcarce, and in but ſmall Quantities, eſpecially after a hot dry Summer and mild Winter, when little or no Snows have fell to cover the Earth, and keep this Spirit in; by which, and great Froſts, it is often much increaſed, and then ſhews itſelf in the Warmth of Well Waters, that are often ſeen to wreak in the cold Seaſons. Now ſince all Vegetables, more or leſs, partake of thoſe Qualities that the Soil and Manures abound with in which they grow, I therefore infer, that all Barley, ſo imbibed, improves its Productions by the Aſcenſion of thoſe ſaline ſpirituous Particles that are thus lodged in the Seed when put into the Ground, and are Part of the Nouriſhment the After-Crop enjoys; and for this Reaſon I doubt not, but when Time has got the Aſcendant of Prejudice, the whole Nation will come into the Practice of the invaluable Receipt, publiſhed in *The Practical Farmer, Or, Hertfordſhire Huſbandman*, Page 25, not only for Barley, but other Grains.

But notwithſtanding Barley may grow on a light Soil with a proper Manure, and improve by the Li-

quor of this Receipt, yet this Grain may be damaged or ſpoiled by being mown too ſoon, which may afterwards be diſcovered by its ſhrivelled and lean Body, that never will make right good Malt; or if it is mown at a proper Time, and if it be houſed damp, or wettiſh, it will be apt to heat and mow-burn, and then it will never make ſo good Malt, becauſe it will not ſpire, nor come ſo regularly on the Floor, as that which was inned dry.

AGAIN, I have known one Part of a Barley-Crop almoſt green at Harveſt, another Part ripe, and another Part between both, tho' it was all ſown at once, occaſioned by the ſeveral Situations of the Seed in the Ground, and the ſucceeding Droughts. The Deepeſt came up ſtrong, and was ripe ſooneſt, the next ſucceeded; but the Uppermoſt, for want of Rain and Cover, ſome of it grew not at all, and the reſt was green at Harveſt. Now theſe Irregularities are greatly prevented and cured by the Application of the Ingredients mentioned in the Receipt, which infuſes ſuch a Moiſture into the Body of the Seed, as with the Help of a little Rain, and the many Dews, makes it ſpire, take Root, and grow, when others are ruined for want of the Aſſiſtance of ſuch Steeping.

BARLEY, like other Grain, will alſo degenerate, and become rank, lean, and ſmall-bodied, if the ſame Seed is ſown too often in the Soil; 'tis therefore that the beſt Farmers not only change the Seed every time, but take due Care to have it off a contrary Soil that they ſow it into; this makes ſeveral in my Neighbourhood every Year buy their Barley-Seed in the Vale of *Ayleſbury*, that grew there on the black, clayey, marly Loams, to ſow in Chalks, Gravels, *&c.* Others every ſecond Year will go from hence to *Fulham*, and buy the Forward, or Rath-ripe Barley, that grows there on ſandy Ground; both which Methods are great Improvements of this Corn; and whether it be for Sowing, or Malting, the plump, weighty, and white Barley-Corn is in all Reſpects much kinder than the lean flinty Sorts.

CHAP.

CHAP. II.

Of Making Malt.

AS I have deſcribed the Ground that returns the beſt Barley, I now come to treat of making it into Malt; to do which, the Barley is put into a leaden or tiled Ciſtern, that holds five, ten, or more Quarters, that is covered with Water, four or ſix Inches above the Barley, to allow for its Swell; here it lies five or ſix Tides, as the Maltſter calls it, reckoning twelve Hours to the Tide, according as the Barley is in Body or in Dryneſs; for that which comes off Clay, or has been waſhed and damaged by Rains, requires leſs Time than the dryer Grain that was inned well, and grew on Gravels or Chalks; the ſmooth plump Corn imbibing the Water more kindly, when the lean and ſteely Barley will not ſo naturally; but to know when it is enough, is to take a Corn, end-ways, between the Fingers, and gently cruſh it, and if it is in all Parts mellow, and the Huſk opens, or ſtarts a little from the Body of the Corn, then it is enough: The Nicety of this is a material Point; for if it is infuſed too much, the Sweetneſs of the Malt will be greatly taken off, and yield the leſs Spirit, and ſo will cauſe Deadneſs and Sourneſs in Ale or Beer in a ſhort Time, for the Goodneſs of the Malt contributes much to the Preſervation of all Ales and Beers. Then the Water muſt be drained from it very well, and it will come equal and better on the Floor, which may be done in twelve or ſixteen Hours in temperate Weather, but in cold near thirty. From the Ciſtern, it is put into a ſquare Hutch or Couch, where it muſt lie thirty Hours, for the Officer to take his Gage, who allows four Buſhels in the Score for the Swell in this, or the Ciſtern; then it muſt be worked Night and Day in one or two Heaps, as the Weather is cold or hot, and turned every four, ſix, or eight Hours, the outward Part inwards, and the Bottom upwards, always keeping a clear Floor, that the Corn that lies next to it be not chilled; and

as ſoon as it begins to come or ſpire, then turn it every three, four, or five Hours, as was done before, according to the Temper of the Air, which greatly governs this Management, and as it comes or works more, ſo muſt the Heap be ſpreaded and thinned larger to cool it. Thus it may lie and be worked on the Floor in ſeveral Parallels, two or three Feet thick, ten or more Feet broad, and fourteen or more in Length, to chip or ſpire, but not too much nor too faſt; and when it is come enough, it is to be turned twelve or ſixteen Times in twenty-four Hours, if the Seaſon is warm, as in *March*, *April*, or *May*; and when it is fixed, and the Root begins to be dead, then it muſt be thickened again, and carefully kept often turned and worked, that the Growing of the Root may not revive, and this is better done with the Shoes off than on; and here the Workman's Art and Diligence in particular is tried, in keeping the Floor clear, and turning the Malt often, that it neither moulds nor aker-ſpires, that is, that the Blade does not grow out at the oppoſite End of the Root; for, if it does, the Flower and Strength of the Malt is gone, and nothing left behind but the Aker-ſpire, Huſk, and Tail: Now when it is at this Degree, and fit for the Kiln, it is often practiſed to put it into a Heap, and let it lie twelve Hours before it is turned, to heat and mellow, which will much improve the Malt if it is done with Moderation, and after that Time it muſt be turned every ſix Hours during twenty-four; but if it is overheated, it will become like Greaſe and be ſpoiled, or at leaſt cauſe the Drink to be unwholſome: When this Operation is over, it then muſt be put on the Kiln, to dry four, ſix, or twelve Hours, according to the Nature of the Malt, for the pale Sort requires more Leiſure, and leſs Fire than the amber or brown Sorts: Three Inches thick was formerly thought a ſufficient Depth for the Malt to lie on the Hair-cloth, but now ſix is often allowed it to a Fault; fourteen or ſixteen Feet ſquare will dry about two Quarters, if the Malt lies four Inches thick, and here it ſhould be turned

ed every two, three, or four Hours, keeping the Hair-cloth clear: The Time of preparing it from the Ciſtern to the Kiln is uncertain, according to the Seaſon of the Year; in moderate Weather, three Weeks are often ſufficient. If the Exciſeman takes his Gage on the Floor, he allows ten in the Score, but he ſometimes gages in Ciſtern, Couch, Floor, and Kiln, and where he can make moſt, there he fixes his Charge: When the Malt is dried, it muſt not cool on the Kiln, but be directly thrown off, not into a Heap, but ſpreaded wide in an airy Place, till it is thoroughly cool, then put it into a Heap, or otherwiſe diſpoſe of it.

THERE are ſeveral Methods uſed in drying of Malts, as the Iron Plate-frame, the Tile-frame, that are both full of little Holes: The Braſs-wired and Iron-wired Frame, and the Hair-cloth; the Iron and Tiled ones were chiefly invented for drying of brown Malts, and ſaving of Fuel; for theſe, when they come to be thorough hot, will make the Corns crack and jump by the Fierceneſs of their Heat, ſo that they will be roaſted or ſcorched in a little Time, and after they are off the Kiln, to plump the Body of the Corn, and make it take the Eye, ſome will ſprinkle Water over it, that it may meet with the better Market: But if ſuch Malt is not uſed quickly, it will ſlacken and loſe its Spirits to a great Degree, and, perhaps, in half a Year or leſs, may be taken by the Whools and ſpoiled: Such haſty Dryings, or Scorchings, are alſo apt to bitter the Malt, by burning its Skin, and therefore theſe Kilns are not ſo much uſed now as formerly: The Wire-frames indeed are ſomething better, yet they are apt to ſcorch the outward Part of the Corn, that cannot be got off ſo ſoon as the Hair-cloth admits of, for theſe muſt be ſwept, when the other is only turned at once; however, theſe laſt three Ways are now in much Requeſt for drying pale and amber Malts, becauſe their Fire may be kept with more Leiſure, and the Malt more gradually and truer dried, but by many the Hair-cloth is reckoned the beſt of all.

MALTS are dried with ſeveral Sorts of Fuel; as the Coak, Welch-coal, Straw, Wood, and Fern, *&c.* But the Coak is reckoned by moſt to exceed all others for making Drink of the fineſt Flavour and pale Colour, becauſe it ſends no Smoak forth to hurt the Malt with any offenſive Tang, that Wood, Fern, and Straw are apt to do in a leſſer or greater Degree; but there is a Difference even in what is called Coak, the right Sort being large Pit-coal charked or burnt in ſome Meaſure to a Cinder, till all the Sulphur is conſumed and evaporated away, which is called Coak, and this, when it is truly made, is the beſt of all other Fuels; but if there is but one Cinder as big as an Egg, that is not thoroughly cured, the Smoak of this one is capable of doing a little Damage, and this happens too often by the Negligence or Avarice of the Coak-maker: There is another Sort, by ſome wrongly called Coak, and rightly named Culm or Welch-coal, from *Swanzey* in *Pembrokeſhire*, being of a hard ſtony Subſtance, in ſmall Bits, reſembling a ſhining Coal, and will burn without Smoak, and by its ſulphureous Effluvia caſt a moſt excellent Whiteneſs on all the outward Parts of the grainy Body: In *Devonſhire* I have ſeen their Marble or grey Fire-ſtone burnt into Lime with the ſtrong Fire that this Culm makes, and both this and the chark'd Pit-coal afford a moſt ſweet, moderate, and certain Fire to all Malt that is dried by it.

STRAW is the next ſweeteſt Fuel, but Wood and Fern worſt of all.

SOME I have known put a Peck or more of Peaſe, and malt them with five Quarters of Barley, and they will greatly mellow the Drink, and ſo will Beans; but they won't come ſo ſoon, nor mix ſo conveniently with the Malt, as the Pea will.

I KNOW a Farmer, when he ſends five Quarters of Barley to be malted, puts in half a Peck or more of Oats amongſt them, to prove he has Juſtice done him by the Maker, who is hereby confined not to change his Malt, by reaſon others won't like ſuch a Mixture.

BUT

But there is an Abuſe ſometimes committed by a neceſſitous Maltſter, who, to come by Malt ſooner than ordinary, makes Uſe of Barley before it is thoroughly ſweated in the Mow, and then it never makes right Malt, but will be ſteely and not yield a due Quantity of Wort, as I knew it once done by a Perſon that thraſhed the Barley immediately from the Cart as it was brought out of the Field, but they that uſed its Malt ſuffered not a little, for it was impoſſible it ſhould be good, becauſe it did not thoroughly chip or ſpire on the Floor, which cauſed this Sort of Malt, when the Water was put to it in the Maſh-tub, to ſwell up and abſorb the Liquor, but not return its due Quantity again, as true Malt would; nor was the Drink of this Malt ever good in the Barrel, but remained a raw inſipid Beer, paſt the Art of Man to cure, becauſe this, like Cyder made from Apples directly off the Tree, that never ſweated out their phlegmatic crude Juice in the Heap, cannot produce a natural Liquor from ſuch unnatural Management; for Barley certainly is not fit to make Malt of till it is fully mellowed and ſweated in the Mow, and the Seaſon of the Year is ready for it, without both which there can be no Aſſurance of good Malt: Several Inſtances of this untimely making Malt I have known to happen, that has been the Occaſion of great Quantities of bad Ales and Beers; for ſuch Malt retaining ſome of its Barley Nature, or that the Seaſon of the Year is not cold enough to admit of its natural Working on the Floor, is not capable of producing a true Malt, but will cauſe its Drink to ſtink in the Caſk inſtead of growing fit for Uſe, as not having its genuine Malt Nature to cure and preſerve it, which all good Malts contribute to as well as the Hop.

There is another Damage I have known to accrue to the Buyer of Malt by Mellilet, a moſt ſtinking Weed that grows among ſome Barley, and is ſo miſchievouſly predominant, as to taint it to a ſad Degree, becauſe its black Seed, like that of an Onion, being leſſer than the Barley, cannot be intirely ſeparated, which obliges it to

be

be malted with the Barley, and makes the Drink ſo heady, that it is apt to fuddle the Unwary by drinking a ſmall Quantity: This Weed is ſo natural to ſome Ground, that the Farmer deſpairs of ever extirpating it, and is to be avoided as much as poſſible, becauſe it very much hurts the Drink that is made from Malt mixed with it, by its nauſeous Scent and Taſte, as may be perceived by the Ointment made with it that bears its Name: I knew a Victualler that bought a Parcel of Malt that this Weed was amongſt, and it ſpoiled all the Brewings, and Sale of the Drink, for it is apt to cauſe Fevers, Colics, and other Diſtempers in the Body.

DARNEL is a rampant Weed and grows much among ſome Barley, eſpecially in the bad Huſbandman's Ground, and moſt where it is ſown with the Seed-barley: It does the leaſt Harm amongſt Malt, becauſe it adds a Strength to it, and quickly intoxicates, if there is much in it; but where there is but little, the Maltſter regards it not, for the Sake of its inebriating Quality. There are other Weeds or Seeds that annoy the Barley; but as the Screen, Sieve, and Throwing will take moſt of them out, there does not require here a Detail of their Particulars. Oats, malted as Barley is, will make a weak, ſoft, mellow, and pleaſant Drink; but Wheat, when done ſo, will produce a ſtrong, heady, nouriſhing, well-taſted, and fine Liquor, which is now more practiſed than ever.

CHAP. III.

To know good *from* bad Malts.

THIS is a Matter of great Importance to all Brewers, both public and private, for it is common for the Sellers to cry, *All is good*, but the Buyer's Caſe is different; wherefore it is prudential to endeavour to be Maſters of this Knowledge; for I have heard a great Maltſter that lived towards *Ware* ſay, he knew a grand Brewer, that wetted near two hundred Quarters a Week,

Week, was not a Judge of good and bad Malts, without which it is impoſſible to draw a true Length of Ale or Beer. To do this, I know but of few Ways, *Firſt*, By the Bite; is to break the Malt-Corn acroſs between the Teeth, in the Middle of it or at both Ends, and if it taſteth mellow and ſweet, has a round Body, breaks ſoft, is full of Flour all its Length, ſmells well, and has a thin Skin, then it is good. *Secondly*, By Water; is to take a Glaſs near full, and put in ſome Malt, and if it ſwims, it is right, but if any ſinks to the Bottom, then it is not true Malt, but ſteely, and retains ſomewhat of its Barley Nature; yet, I muſt own, this is not an infallible Rule, becauſe if a Corn of Malt is cracked, ſplit, or broke, it will then take the Water and ſink, but there may an Allowance be given for ſuch Incidents, and ſtill Room enough to make a Judgment. *Thirdly*, Malt that is truly made, will not be hard and ſteely, but of ſo mellow a Nature, that, if forced againſt a dry Board, will mark, and caſt a white Colour almoſt like Chalk. *Fourthly*, Malt that is not rightly made will be Part of it of a hard Barley Nature, and weigh heavier than that which is true Malt.

CHAP. IV.

Of the Nature and Uſe of Pale, Amber, *and* Brown Malts.

THE pale Malt is the ſloweſt and ſlackeſt dried of any, and where it has had a leiſure Fire, a ſufficient Time allowed on the Kiln, and a due Care taken of it, the Flour of the Grain will remain in its full Quantity, and thereby produce a greater Length of Wort, than the brown high dried Malt, for which Reaſon it is ſold for one or two Shillings *per* Quarter more than that: This pale Malt is alſo the moſt nutritious Sort to the Body of all others, as being in this State the moſt ſimple and neareſt to its original Barley-corn, that will retain an alcalous and balſamic Quality much longer than

than the brown Sort; the tender Drying of this Malt bringing its Body into ſo ſoft a Texture of Parts, that moſt of the great Brewers brew it with Spring and Well-waters, whoſe hard and binding Properties they think agree beſt with this looſe-bodied Malt, either in Ales or Beers, and which will alſo diſpenſe with hotter Waters in brewing of it, than the brown Malt can.

THE amber-coloured Malt is that which is dried in a medium Degree, between the Pale and the Brown, and is very much in Uſe, as being free of either Extream. Its Colour is pleaſant, its Taſte agreeable, and its Nature wholeſome, which makes it be preferred by many as the beſt of Malts; this by ſome is brewed either with hard or ſoft Waters, or a Mixture of both.

THE brown Malt is the ſooneſt and higheſt dried of any, even till it is ſo hard, that it is difficult to bite ſome of its Corns aſunder, and is often ſo cruſted or burnt, that the farinous Part loſes a great deal of its eſſential Salts and vital Property, which frequently deceives its ignorant Brewer, that hopes to draw as much Drink from a Quarter of this, as he does from Pale or Amber Sorts: This Malt, by ſome, is thought to occaſion the Gravel and Stone, beſides what is commonly called the Heart-burn; and is by its ſteely Nature leſs nouriſhing than the Pale or Amber-malts, being very much impregnated with the fiery fumiferous Particles of the Kiln, and therefore its Drink ſooner becomes ſharp and acid than that made from the Pale or Amber Sorts, if they are all fairly brewed: For this Reaſon the *London* Brewers moſtly uſe the *Thames* or *New River* Waters to brew this Malt with, for the Sake of its ſoft Nature, whereby it agrees with the harſh Qualities of it better than any of the Well or other hard Sorts, and makes a luſcious Ale for a little While, and a But-beer that will keep very well five or ſix Months, but after that Time it generally grows ſtale, notwithſtanding there be ten or twelve Buſhels allowed to the Hogſhead, and it be hopped accordingly.

Pale and Amber Malts dried with Coak or Culm, obtain a more clean, bright, pale Colour, than if dried with any other Fuel, becauſe there is not Smoak to darken and ſully their Skins or Huſks, and give them an ill Reliſh, that thoſe Malts little or more have, which are dried with Straw, Wood or Fern, *&c.* The Coak or *Welch* Coal alſo makes more true and compleat Malt, as I have before hinted, than any other Fuel, becauſe its Fire gives both a gentle and certain Heat, whereby the Corns are in all their Parts gradually dried, and therefore of late theſe Malts have gained ſuch a Reputation that great Quantities have been conſumed in moſt Parts of the Nation for their wholeſome Natures and ſweet fine Taſte: Theſe make ſuch fine Ales and Butt-beers, as has tempted ſeveral of our Maltſters in my Neighbourhood to burn Coak or Culm at a great Expence of Carriage thirty Miles from *London*.

Next to the Coak-dried Malt, the Straw-dried is the ſweeteſt and beſt taſted: This, I muſt own, is ſometimes well malted, where the Barley, Wheat, Straw, Conveniences, and the Maker's Skill are good; but as the Fire of the Straw is not ſo regular as the Coak, the Malt is attended with more Uncertainty in its Making, becauſe it is difficult to keep it to a moderate and equal Heat, and alſo expoſes the Malt in ſome Degree to the Taſte of the Smoak.

Brown Malts are dried with Straw, Wood, and Fern, *&c.* the Straw-dried is far the beſt, but the Wood-ſort has a moſt unnatural Taſte, that few can bear with, but the Neceſſitous, and thoſe that are accuſtomed to its ſtrong ſmoaky Tang; yet it is much uſed in ſome of the Weſtern Parts of *England*, and many thouſand Quarters of this Malt have been formerly uſed in *London* for brewing the Butt-keeping Beers with, and that becauſe it ſold for two Shillings *per* Quarter cheaper than the Straw-dried Malt; nor was this Quality of the Wood-dried Malt much regarded by ſome of its Brewers, for that its ill Taſte is loſt in nine or twelve Months, by the Age of the Beer, and the Strength of

the great Quantity of Hops that were uſed in its Preſervation.

The Fern-dried Malt is alſo attended with a rank diſagreeable Taſte from the Smoak of this Vegetable, with which many Quarters of Malt are dried, as appears by the great Quantities annually cut by our Maltſters on our Commons, for the two prevalent Reaſons, Cheapneſs and Plenty.

At *Bridport* in *Dorſetſhire*, I knew an Inn-keeper uſe half Pale and half Brown Malt for brewing his Butt-beers, that proved to my Palate the beſt I ever drank on the Road, which I think may be accounted for, in that the Pale being the ſlackeſt, and the Brown the hardeſt dried, muſt produce a mellow good Drink, by the Help of a requiſite Age, that will reduce thoſe Extreams to a proper Quality.

CHAP. V.

Of the Nature of ſeveral Waters, *and their Uſe in* Brewing. *And firſt of* Well-waters.

WATER, next to Malt, is what by courſe comes here under Conſideration, as a Matter of great Importance in brewing of wholeſome fine Malt liquors, and is of ſuch Conſequence, that it concerns every one to know the Nature of the Water he brews with, becauſe it is the Vehicle by which the nutritious and pleaſant Particles of the Malt and Hop are conveyed into our Bodies, and there become a Diluter of our Food: Now the more ſimple and freer every Water is from foreign Particles, the better it will anſwer thoſe Ends and Purpoſes; for, as Dr. *Mead* obſerves, ſome Waters are ſo loaded with ſtony Corpuſcles, that even the Pipes thro' which they are carried, in Time, are incruſted and ſtopped up by them, and are of that petrifying Nature as to breed the Stone in the Bladder, which many of the *Pariſians* have been Inſtances of, by uſing this Sort of Water out of the River *Seine*. And of this Nature is another

other at *Rowel* in *Northamptonſhire*, which in no great Diſtance of Time ſo clogs the Wheel of an overſhot Mill there, that they are forced with convenient Inſtruments to cut Way for its Motion; and what makes it ſtill more evident, is the Sight of thoſe incruſted Sides of the Tea-kettles, that the hard Well-waters are the Occaſion of, by being often boiled in them: And it is farther related by the ſame Doctor, that a Gentlewoman afflicted with frequent Returns of violent Colic-pains was cured by the Advice of *Van Helmont*, only by leaving off drinking Beer brewed with Well-water: It is true, ſuch a Fluid has a greater Force and Aptneſs to extract the Tincture out of Malt, than is to be had in the more innocent and ſoft Liquors of Rivers: But for this very Reaſon it ought not, unleſs upon mere Neceſſity, to be made Uſe of; this Quality being owing to the mineral Particles and alluminous Salts with which it is impregnated. For theſe Waters, thus ſaturated, will, by their various Gravities in Circulation, depoſit themſelves in one Part of the animal Body or other, which has made ſome prove the Goodneſs of Water by the Lightneſs of its Body in the Water-ſcales, now ſold in ſeveral of the *London* Shops, in order to avoid the ſcorbutic, colicy, hypocondriac, and other ill Effects of the clayey and other groſs Particles of ſtagnating Well-waters, and the calculous Concretions of others; and therefore ſuch Waters ought to be miſtruſted more than any, where they are not pure, clear, and ſoft, or that do not ariſe from good Chalks or ſtony Rocks, that are generally allowed to afford the beſt of all the Well-ſorts.

Spring-Waters are in general liable to partake of thoſe Minerals thro' which they paſs, and are ſalubrious or miſchievous accordingly. At *Uppingham* in *Rutland*, their Water is ſaid to come off an Allum-rock, and ſo tinges their Beer with its ſaline Quality, that it is eaſily taſted at the firſt Draught. And at *Dean* in *Northamptonſhire*, I have ſeen the very Stones colour the ruſty Iron by the conſtant Running of a Spring-water; but that which will lather with Soap, or ſuch ſoft Water

that percolates thro' Chalk, or a grey Fire-ſtone, is generally accounted beſt; for Chalk in this Reſpect excels all other Earths, in that it adminiſters nothing unwholeſome to the perfluent Waters, but undoubtedly abſorbs, by its drying ſpungy Quality, any ill Minerals that may accompany the Water that runs thro' them. For which Reaſon they throw in great Quantities of Chalk into their Wells at *Ayleſbury* to ſoften their Water, which coming off a black Sand-ſtone, is ſo hard and ſharp, that it will often turn their Beer ſour in a Week's Time, ſo that in its original State it is neither fit to waſh nor brew with, but ſo long as the alcalous ſoft Particles of the Chalk hold good, they put it to both Uſes.

River-Waters are leſs liable to be loaded with metallic, petrifying, ſaline, and other inſanous Particles of the Earth, than the Well or Spring-ſorts are, eſpecially at ſome Diſtance from the Spring-head, becauſe the Rain-water mixes with and ſoftens it; and are alſo much cured by the Sun's Heat and the Air's Power, for which Reaſon I have known ſeveral ſo ſtrict, that they will not let their Horſes drink near the firſt Riſe of ſome of them; this I have ſeen the ſad Effects of, and which has obliged me to avoid two that run croſs a Road in *Bucks* and *Hertfordſhire:* But in their Runnings they often collect groſs Particles, from ouzy muddy Mixtures, particularly near Town, that make the Beer ſubject to new Fermentations, and grow foul upon Alteration of Weather, as the *Thames*-water generally does; yet is this for its Softneſs much better than the hard Sort; however, both theſe Waters are uſed by ſome Brewers, as I ſhall hereafter obſerve: But where a River-water can be had clear in a dry Time, when no great Rain has lately fell out of Rivulets, or Rivers that have a gravelly, chalky, ſandy, or ſtony Bottom, free from the Diſturbance of Cattle, *&c.* and in good Air, as that of *Barkhamſtead* St. *Peter*'s in *Hertfordſhire* is; it may then juſtly claim the Name of a moſt excellent Water for Brewing, and will make a ſtronger Drink

with

with the ſame Quantity of Malt than any of the Well-waters; inſomuch that that of the *Thames* has been proved to make as ſtrong Beer with ſeven Buſhels of Malt, as Well-water with eight; and ſo are all River-waters in a proportionable Degree, and, where they can be obtained clean and pure, Drink may be drawn fine in a few Days after Tunning.

RAIN-WATER is very ſoft, of a moſt ſimple and pure Nature, and the beſt Diluter of any, eſpecially if received free from Dirt, and the Salt of Mortar that often mixes with it as it runs off tiled Roofs; this is very agreeable for brewing of Ales that are not to be kept a great While, but for Beers that are to remain ſome Time in the Caſks, it is not ſo well, as being apt to putrify the ſooneſt of any.

POND-WATERS; this includes all ſtanding Waters chiefly from Rain, and are good or bad as they happen; for where there is a clean Bottom, and the Water lies undiſturbed from the Tread of Cattle, or too many Fiſh, in an open ſound Air, in a large Quantity, and where the Sun has free Acceſs, it then comes near, if not quite as good as Rain or River-waters; as is that of *Blue-pot* Pond on the high Green at *Gaddeſden* in *Hertfordſhire*, and many others, which are often preferred for Brewing, even beyond many of the ſoft Well-waters about them. But where it is in a ſmall Quantity, or full of Fiſh (eſpecially the Sling-tench) or is ſo diſturbed by Cattle, as to force up Mud and Filth, it is then the moſt foul and diſagreeable of all others: So is it likewiſe in long dry Seaſons when our Pond-waters are ſo low as obliges us to ſtrain it thro' Sieves before we can uſe it, to take out the ſmall red Worms and other Corruptions, that our ſtagnant Waters are generally then too full of. The lateſt and beſt Doctors have ſo far ſcrutiniſed into the prime Cauſe of our *Britiſh* Malady the Scurvy, as to affirm its firſt Riſe is from our unwholeſome ſtagnating Waters, and eſpecially thoſe that come off a clayey Surface, as there are about *Londonderry* and *Amſterdam*; for that, where the Waters are worſt,

there this Diſtemper is moſt common; ſo that in their Writings they have put it out of all Doubt, that moſt of our complicated Symptoms that are ranked under this general Name, if they do not take their Beginning from ſuch Water, do own it to be their chief Cauſe.

CHAP. VI.

Of Grinding Malts.

AS trifling as this Article in Brewing may ſeem at firſt, it very worthily deſerves the Notice of all concerned therein; for on this depends much the Good of our Drink, becauſe, if it is ground too ſmall, the Flour of the Malt will be the eaſier and more freely mixed with the Water, and then will cauſe the Wort to run thick; and therefore the Malt muſt be only juſt broke in the Mill, to make it emit its Spirit gradually, and incorporate its Flour with the Water in ſuch a Manner, that firſt a ſtout Beer, then an Ale, and afterwards a ſmall Beer may be had at one and the ſame Brewing, and the Wort run off fine and clear to the laſt. Many are likewiſe ſo ſagacious as to grind their brown Malt a Fortnight before they uſe it, and keep it in a dry Place from the Influence of too moiſt an Air, that it may become mellower by loſing in a great Meaſure the Fury of its harſh fiery Particles, and its ſteely Nature, which this Sort of Malt acquires on the Kiln; however, this, as well as many other hard Bodies, may be reduced by Time and Air into a more ſoluble, mellow, and ſoft Condition, and then it will imbibe the Water and give a natural kind Tincture more freely, by which a greater Quantity, and ſtronger Drink, may be made, than if it was uſed directly from the Mill, and be much ſmoother and better taſted. But pale Malts will be fit for Uſe at a Week's End, becauſe the Leiſureneſs of their Drying endows them with a Softneſs from the Time they are taken off the Kiln to the Time they are brewed, and ſupplies in them what Time and Air muſt

do in the brown Sorts. This Method of grinding Malt ſo long beforehand cannot be ſo conveniently practiſed by ſome of the great Brewers, becauſe ſeveral of them brew two or three Times a Week; but now moſt of them, out of good Huſbandry, grind their Malts into the Tun by the Help of a long, deſcending, wooden Spout; and here they ſave the Charge of emptying or uncaſing it out of the Bin, and alſo the Waſte of a great deal of the Malt-flour, that was loſt when carried in Baſkets, whereas now the Cover of the Tun prevents all that Damage. In my common Brew-houſe at *London*, I ground my Malt between two large Stones by the Horſe-mill, but in the Country I uſe a ſteel Hand-mill, that coſt at firſt forty Shillings, which will, by the Help of only one Man, grind ſix or eight Buſhels in an Hour, and will laſt a Family many Years without Hardening or Cutting. There are ſome old-faſhioned ſtone Hand-mills in Being, that ſome prefer to the iron ones, becauſe they alledge that theſe break the Corn's Body, when the iron ones only cut it in two, which occaſions the Malt, ſo broke by the Stones, to give the Warer a more eaſy, free, and regular Power to extract its Vertue, than the Cut-malt can that is more confined within its Hull. Notwithſtanding, the iron ones are now moſtly in Uſe, for their great Diſpatch in and long Duration. In the Country they frequently throw a Sack of Malt on a Stone or Brick-floor as ſoon as it is ground, and let it lie, giving it one Turn, for a Day or two, that the Stones or Bricks may draw out the fiery Quality it received from the Kiln, and give the Drink a ſoft mild Taſte.

CHAP. VII.

Of Brewing *in general.*

BREWING, like ſeveral other Arts, is proſtituted to the opinionated Ignorance of many conceited Pretenders, who, if they have but ſeen, or been concerned in but one Brewing, and that only one Buſhel of Malt,

aſſume the Name of a Brewer, and dare venture on ſeveral afterwards, as believing it no other Taſk, than more Labour, to brew a great deal as well as a little; from hence it partly is, that we meet with ſuch hodge-podge Ales and Beers, as are not only diſagreeable in Taſte and foul, but unwholeſome to the Body of Man; for, as it is often drank thick and voided thin, the *Fæces* or groſs Part muſt, in my Opinion, remain behind in ſome Degree. Now what the Effects of that may be, I muſt own, I am not Phyſician enough to explain, but ſhrewdly ſuſpect it may be the Cauſe of Stones, Colics, Obſtructions, and ſeveral other chronical Diſtempers; for if we conſider that the Sediments of Malt-liquors are the Refuſe of corrupted Grain, loaded with the igneous acid Particles of the Malt, and then again with the corroſive Particles of the Yeaſt, it muſt conſequently be very pernicious to the human Body, which certainly ſuffers much from the animal Salts of the great Quantities of Fleſh that we eat, more than People of any other Nation whatſoever; and therefore ſhould be more than ordinarily cautious not to add the ſcorbutic mucilaginous Qualities of ſuch groſs unwholeſome Particles, that every one makes a Lodgment of in their Bodies, as the Liquors they drink are more or leſs thick; for, in plain Truth, no Malt-liquor can be good unleſs it is fine. The late curious *Simon Harcourt*, Eſq; of *Penly*, thought the true Art of Brewing of ſuch Importance, that it is ſaid to have coſt him near twenty Pounds to have an old Days-man taught it by a *Welch* Brewer; and ſure it was, this very Man exceeded all others in theſe Parts afterwards in the Brewing of that which he called his *October* Beer. So likewiſe in *London* they lay ſuch Streſs on this Art, that many have thought it worth their While to give ſeveral hundred Guineas with an Apprentice: This Conſideration alſo made an Ambaſſador give an extraordinary Encouragement to one of my Acquaintance to go over with him, that was a great Maſter of this Science. But notwithſtanding all that can be ſaid, that relates to this Subject, there are ſo many Incidents attending

ing Malt-liquors, that it has puzzled ſeveral expert Men to account for their Difference, tho' brewed by the ſame Brewer, with the ſame Malt, Hops, and Water, and in the ſame Month and Town, and tapped at the ſame Time: The Beer of one being fine, ſtrong, and well taſted, while the others have not had any worth drinking; now this may be owing to the different Weather in the ſame Month, that might cauſe an Alteration in the Working of the Liquors, or that the Cellar may not be ſo convenient, or that the Water was more diſturbed by Winds or Rains, *&c.* But it has been obſerved, that, where a Gentleman has employ'd one Brewer conſtantly, and uſes the ſame Sort of Ingredients, and the Beer is kept in dry Vaults and Cellars that have two or three Doors, the Drink has been generally good. And where ſuch Malt-liquors are kept in Butts, more Time is required to ripen, meliorate, and fine them, than thoſe kept in Hogſheads, becauſe the greater Quantity muſt have the longer Time; ſo alſo a greater Quantity will preſerve itſelf better than a leſſer one, and on this Account the Butt and Hogſhead are the two beſt ſized Caſks of all others; but all under a Hogſhead hold rather too ſmall a Quantity to keep their Bodies. The Butt is certainly a moſt noble Caſk for this Uſe, as being generally ſet upright, whereby it maintains a large Cover of Yeaſt, that greatly contributes to the keeping in the Spirit of the Beer, admits of a moſt convenient Broaching in the Middle, and its lower Part, and, by its broad level Bottom, gives a better Lodgment to the fining and preſerving Ingredients, than any other Caſk whatſoever that lies in the long Croſs-form. Hence it partly is, that the common Butt-beer is at this Time in greater Reputation than ever in *London*, and the Home-brewed Drinks out of Credit; becauſe the firſt is better cured in its Brewing, in its Quantity, in its Caſk, and in its Age; when the latter has been loaded with the pernicious Particles of great Quantities of Yeaſt, of a ſhort Age, and kept in ſmall Caſks, that confines its Owner, only to Winter Brewing and Sale, as not being capable of ſuſtaining the Heat of

the Weather, for that the Acidity of the Yeaſt brings on a ſudden Hardneſs and Staleneſs of the Ale, which to preſerve in its mild aley Taſte, will not admit of any great Quantity of Hops; and this is partly the Reaſon that the Handful of Salt, which the *Plymouth* Brewers put into their Hogſhead, hinders their Ale from keeping, as I ſhall hereafter take Notice of.

CHAP. VIII.

The London *Way of* Brewing.

IN a great Brew-houſe that I was concerned in, they wetted or uſed a conſiderable Quantity of Malt in one Week in brewing Stout-beer, common Butt-beer, Ale, and Small-beer; for which Purpoſe they have River and Well-waters, which they take in ſeveral Degrees of Heat, as the Malt, Goods, and Grain are in a Condition to receive them; and, according to the Practice there, I ſhall relate the following Particulars, *viz.*

For Stout Butt-beer.

THIS is the ſtrongeſt Butt-beer that is brewed from brown Malt, and often ſold for forty Shillings the Barrel, or ſix Pounds the Butt out of the wholeſale Cellars: The Liquor (for it is Six-pence Forfeit in the *London* Brew-houſe if the Word *Water* is named) in the Copper deſigned for the firſt Maſh, has a two-buſhel Baſket, or more, of the moſt hully Malt thrown over it, to cover its Top, and forwards its Boiling; this muſt be made very hot, almoſt ready to boil, yet not ſo as to bliſter, for then it will be in too high a Heat; but, as an Indication of this, the foul Part of the Liquor will aſcend, and the Malt ſwell up, and then it muſt be parted, looked into, and felt with the Finger or Back of the Hand, and if the Liquor is clear and can but be juſt endured, it is then enough, and the Stoker muſt damp his Fire as ſoon as poſſible, by throwing in a good Parcel of freſh Coals, and ſhutting his iron Vent-doors, if there are any; immediately on this, they let as much cold Liquor or Wa-

ter

ter run into the Copper as will make it all of a Heat, ſomewhat more than Blood-warm; this they pump over, or let it paſs by a Cock into an upright wooden ſquare Spout or Trunk, and it directly riſes thro' the Holes of a falſe Bottom into the Malt, which is worked by ſeveral Men with Oars for about half an Hour, and is called the firſt and ſtiff Maſh: While this is doing, there is more Liquor heating in the Copper, that muſt not be let into the Maſh-tun till it is very ſharp, almoſt ready to boil; with this they maſh again, then cover it with ſeveral Baſkets of Malt, and let it ſtand an Hour before it runs into the Under-back, which, when boiled an Hour and a half with a good Quantity of Hops, makes this Stout. The next is maſhed with a cooler Liquor, then a ſharper, and the next Blood-warm or quite cold; by which alternate Degrees of Heat, a Quantity of ſmall Beer is made after the Stout.

For brewing ſtrong brown Ale, called Stitch.

THIS is moſt of it the firſt Running of the Malt, but yet of a longer Length than is drawn for the Stout; it has but few Hops boiled in it, and is ſold for eight Pence *per* Gallon at the Brew-houſe out of the Tun, and is generally made to amend the common brown Ale with, on particular Occaſions. This Ale, I remember, was made Uſe of by Mr. *Medlicot*, in the Beginning of a Conſumption, and I heard him ſay, it did him very great Service, for he lived many Years afterwards.

For brewing common brown Ale and Starting-beer.

THEY take the Liquors from the brown Ale as for the Stout, but draw a greater Quantity from the Malt, than for Stout or Stitch, and after the ſtiff and ſecond Maſh they cap the Goods with freſh Malt, to keep in the Spirit and boil it an Hour; after this ſmall Beer is made of the ſame Goods. Thus alſo, the common brown ſtarting Butt-beer is brewed, only boiled with more Hops an Hour and a half, and worked cooler and longer than the brown Ale, and a ſhorter Length drawn from the Malt. But it is often practiſed after the brown

Ale, and where a Quantity of ſmall Beer is wanted, or it is to be brewed better than ordinary, to put ſo much freſh Malt on the Goods as will anſwer that Purpoſe.

For Brewing Pale and Amber Ales and Beers.

As the brown Malts are brewed with River, theſe are brewed with Well or Spring-liquors. The Liquors are by ſome taken ſharper for pale than brown Malts, and, after the firſt ſcalding Liquor is put over, ſome lower the reſt by Degrees, to the laſt, which is quite cold, for their ſmall Beer; ſo alſo for Butt-beers, there is no other Difference than the Addition of more Hops, and Boiling, and the Method of Working. But the Reaſons for brewing pale Malts with Spring, or hard Well-waters, I have mentioned in my *Second Book of Brewing*.

For brewing intire Guile ſmall Beer.

On the firſt Liquor they throw ſome hully Malt, to ſhew the Break of it, and when it is very ſharp, they let in ſome cold Liquor, and run it into the Tun milk-warm; this is maſhed with thirty or forty Pulls of the Oar, and let ſtand till the ſecond Liquor is ready, which muſt be almoſt ſcalding hot to the Back of the Hand; then run it by the Cock into the Tun, maſh it up, and let it ſtand an Hour before it is ſpent off into the Under-back: Theſe two Pieces of Liquor will make one Copper of the firſt Wort, without putting any freſh Malt on the Goods; the next Liquor to be Blood-warm, the next ſharp, and the next cool or cold; for the general Way in great Brew-houſes is, to let a cool Liquor precede a ſharp one; becauſe it gradually opens the Pores of the Malt and Goods, and prepares the Way for the hotter Liquor that is to follow.

The ſeveral Lengths or Quantities of Drinks that have been made from Malt, and their ſeveral Prices, as they have been ſold at a common Brew-houſe.

For Stout-beer, is commonly drawn one Barrel off a Quarter of Malt, and ſold for thirty Shillings *per* Barrel

rel from the Tun. For Stitch or ſtrong brown Ale, one Barrel and a Firkin, at one and twenty Shillings and four Pence *per* Barrel from the Tun. For common brown Ale, one Barrel and a half, or more, at ſixteen Shillings *per* Barrel, that holds thirty-two Gallons from the Tun. For intire ſmall Beer, five or ſix Barrels off a Quarter, at ſeven or eight Shillings *per* Barrel from the Tun. For pale and amber Ale, one Barrel and a Firkin, at one Shilling *per* Gallon from the Tun.

CHAP. IX.

The Country or Private Way of Brewing.

SEVERAL Countries have their ſeveral Methods of Brewing, as it is practiſed in *Wales*, *Dorcheſter*, *Nottingham*, *Oundle*, and many other Places; but avoiding Particulars, I ſhall here recommend that which I think is moſt ſerviceable both in Country, and *London* private Families. And firſt, I ſhall obſerve, that the great Brewer has ſome Advantages in Brewing more than the ſmall one, and yet the Latter has ſome Conveniencies which the Former can't enjoy; for 'tis certain, that the great Brewer can make more Drink, and draw a greater Length in Proportion to his Malt, than a Perſon can from a leſſer Quantity, becauſe, the greater the Body, the more is its united Power in Receiving and Diſcharging, and he can brew with leſs Charge and Trouble, by means of his more convenient Utenſils. But then the private Brewer is not without his Benefits; for he can have his Malt ground at Pleaſure, his Tubs and moveable Coolers ſweeter and better cleaned than the great fixed Tuns and Backs; he can ſkim off his top Yeaſt, and leave his bottom Lees behind, which is what the great Brewer can't ſo well do; he can at Diſcretion make Additions of cold Wort to his too forward Ales and Beers, which the great Brewer can't ſo eaſily do; he can brew how and when he pleaſes, which the great Ones

Ones are in ſome Meaſure hindered from. But to come nearer the Matter, I will ſuppoſe a private Family to brew five Buſhels of Malt, whoſe Copper holds brim-full thirty-ſix Gallons or a Barrel: On this Water we put half a Peck of Bran or Malt, when it is ſomething hot, which will much forward it, by keeping in the Steam or Spirit of the Water; and when it begins to boil, if the Water is foul, ſkim off the Bran or Malt, and give it to the Hogs, or elſe lade both the Water and that into the Maſh-vat, where it is to remain till the Steam is near ſpent, and you can ſee your Face in it, which will be in about a Quarter of an Hour in cold Weather; then let all but half a Buſhel of the Malt run very leiſurely into it, ſtirring it all the while with an Oar or Paddle, that it may not ball, and when the Malt is all but juſt mixed with Water, it is enough, which I am ſenſible is different from the old Way, and the general preſent Practice; but I ſhall here clear that Point. For, by not ſtirring or maſhing the Malt into a pudding Conſiſtence or thin Maſh, the Body of it lies in a more looſe Condition, that will eaſier and ſooner admit of a quicker and more true Paſſage of the After-ladings of the ſeveral Bowls or Jets of hot Water, which muſt run through it before the Brewing is ended; by which free Percolation, the Water has ready Acceſs to all the Parts of the broken Malt, ſo that the Brewer is capacitated to brew quicker or ſlower, and to make more Ale or ſmall Beer: If more Ale, then hot boiling Water muſt be laded over ſo ſlow, that one Bowl muſt run almoſt off before another is put over, which will occaſion the whole Brewing to laſt about ſixteen Hours, eſpecially if the *Oundle* Way is followed, of ſpending it out of the Tap as ſmall as a Straw, and as fine as Sack, and then it will be quickly ſo in the Barrel: Or if leſs or weaker Ale is to be made, and good ſmall Beer, then the ſecond Copper of boiling Water may be put over expeditiouſly, and drawn out with a large and faſt Stream. After the firſt Stirring of the Malt is done, then put over the Reſerve of half a Buſhel of freſh Malt to the

four

four Buſhels and half that are already in the Tub, which muſt be ſpread all over it, and alſo cover the Tub with ſome Sacks or other Cloths to keep in the Steam or Spirit of the Malt; then let it ſtand for two or three Hours, at the End of which, put over now and then a Bowl of the boiling Water in the Copper, as is before directed, and ſo continue to do till as much is run off as will almoſt fill the Copper; then in a Canvas or other looſe woven Cloth, put in half a Pound of Hops, and boil them half an Hour, when they muſt be taken out, and as many freſh ones put in their Room as are judged proper to boil half an Hour more, if for Ale: But if for keeping Beer, half a Pound of freſh ones ſhould be put in, every half Hour, and boil an Hour and a half briſkly: Now, while the firſt Copper of Wort is boiling, there ſhould be ſcalding Water leiſurely put over the Goods, Bowl by Bowl, and run off, that the Copper may be filled again immediately after the Firſt is out, and boiled an Hour, with near the ſame Quantity of freſh Hops, and in the ſame Manner as thoſe in the firſt Copper of Ale-wort were. The reſt for ſmall Beer may be all cold Water put over the Grains at once, or at twice, and boiled an Hour each Copper, with the Hops that have been boiled before. But here I muſt obſerve, that ſometimes I have not an Opportunity to get hot Water for making all my ſecond Copper of Wort, which obliges me then to make uſe of cold to ſupply what was wanting. Out of five Buſhels of Malt, I generally make a Hogſhead of Ale, with the two firſt Coppers of Wort, and a Hogſhead of ſmall Beer with the other two; but this more or leſs as it pleaſes me, always taking care to let each Copper of Wort be ſtrained off thro' a Sieve, and cool in four or five Tubs to prevent its Foxing. Thus I have brewed many Hogſheads of middling Ale, that, when the Malt is good, has proved ſtrong enough for myſelf, and ſatisfactory to my Friends: But for ſtrong keeping Beer, the firſt Copper of Wort may be wholly put to that Uſe, and all the reſt ſmall Beer: Or, when the firſt Copper of

Wort

Wort is entirely made uſe of for ſtrong Beer, the Goods may be helped with more freſh Malt, according to the *London* Faſhion, and Water lukewarm put over at firſt with the Bowl, but ſoon after ſharp or boiling Water, which may make a Copper of good Ale, and ſmall Beer after that. In ſome Parts of the North, they take one or more Cinders red hot, and throw ſome Salt on them to overcome the Sulphur of the Coal, and then directly thruſt it into the freſh Malt or Goods, where it lies till all the Water is laded over, and the Brewing done, for there are only one or two Maſhings or Stirrings at moſt neceſſary in a Brewing: Others, that brew with Wood, will quench one or more Brands Ends of Aſh in a Copper of Wort, to mellow the Drink, as a burnt Toaſt of Bread does a Pot of Beer; but it is to be obſerved, that this muſt not be done with Oak, Fir, or any other ſtrong ſcented Wood, leſt it does more harm than good.

Another Way.

When ſmall Beer is not wanted, and another Brewing is ſoon to ſucceed the Former, then may the laſt ſmall Beer Wort, that has no Hops boiled in it, remain in the Copper all Night, which will prevent its Foxing, and be ready to boil inſtead of ſo much Water to put over the next freſh Malt: This will greatly contribute to the ſtrengthening, bettering, and colouring of the next Wort, and is commonly uſed in this Manner, when Stout or *October* Beer is to be made, not that it is leſs ſerviceable if it was for Ale, or intire Guile ſmall Beer; but leſt it ſhould taſte of the Copper, by remaining all Night in it, it may be diſperſed into Tubs, and kept a Week or more together, if ſome freſh cold Water is daily added to it; and may be brewed as I have mentioned, taking particular Care in this, as well as the former Ways, to return two, three or more Hand-bowls of Wort into the Maſh tub, that firſt of all runs off, till it comes abſolutely fine and clear, and then it may ſpend away, or run off for good: Others will reſerve this ſmall Beer Wort unboiled in Tubs,

and

and keep it there a Week in Winter, or two or three Days in Summer, according to Conveniency, by putting freſh Water every Day to it, and uſe it inſtead of Water for the firſt Maſh, alledging it is better ſo than boiled, becauſe by that it is thickned, and the Wort is made to run foul; this may be a Benefit to a Victualler that brews to ſell again, and cannot vent his ſmall Beer; becauſe, for ſuch ſmall raw Wort that is mix'd with any Water, there is no Exciſe to be paid.

For Brewing intire Guile ſmall Beer.

THERE can be no Way better for making good ſmall Beer, than by brewing it from freſh Malt, becauſe in Malt as well as in Hops, and ſo in all other Vegetables, there is a ſpirituous and earthy Part, as I ſhall further enlarge on in writing of the Hop; therefore all Drink brewed from Goods or Grains, after the firſt or ſecond Worts are run off, is not ſo good and wholeſome, as that intirely brewed from freſh Malt, nor could any Thing but Neceſſity cauſe me to make uſe of ſuch Liquor; yet how many Thouſands are there in this Nation, that know nothing of the Matter, tho' it is of no ſmall Importance, and ought to be regarded by all thoſe that value their Health and Taſte? 'And here I advertiſe every one who reads or hears this, and is capable of being his own Friend, ſo far to mind this *Item*, and prefer that ſmall Beer which is made intirely from freſh Malt, before any other that is brewed after ſtrong Beer or Ale. Now to brew ſuch Guile ſmall-Beer, after the boiling Water has ſtood in the Tub till it is clear, put in the Malt leiſurely, and maſh it, that it does not ball or clot; then throw over ſome freſh Malt on the Top, and Cloths over that, and let it ſtand two Hours before it is drawn off; the next Water may be between hot and cold, the next boiling hot, and the next cold; or, if Conveniency allows not, there may be once ſcalding Water, and all the reſt cold inſtead of the laſt three. Thus I brew my intire Guile ſmall Beer, by putting the firſt and laſt Worts together, allowing

half, or a Pound of Hops to a Hogſhead, and boiling it one Hour; but, if the Hops were ſhifted twice in that Time, the Drink would plainly diſcover the Benefit. Sometimes, when I have been in haſte for ſmall Beer, I have put half a Buſhel of Malt, and a few Hops into my Barrel-Copper, and boiled a Kettle Gallop, as ſome call it, an Hour, and made me a preſent Drink, till I had more Leiſure to brew better.

A particular Way of Brewing ſtrong October *Beer.*

THERE was a Man in this Country that brewed for a Gentleman conſtantly, after a very preciſe Method; and that was, as ſoon as he had put over all his firſt Copper of Water, and maſhed it ſome Time, he would directly let the Cock run a ſmall Stream, and preſently put ſome freſh Malt on the Former, and maſh on, while the Cock was ſpending, which he would put again over the Malt, as often as his Pail or Hand-bowl was full, and this for an Hour or two together, then he would let it run off intirely, and put it over at once, to run off again as ſmall as a Straw. This was for his *October* Beer: Then he would put ſcalding Water over the Goods at once, but not maſh, and cap them with more freſh Malt, that ſtood an Hour undiſturbed before he would draw it off for Ale; the reſt was hot Water put over the Goods, and maſh'd at twice for ſmall Beer: And it was obſerved, that his *October* Beer was the moſt famous in the Country, but his Grains good for little, for that he had by this Method waſhed out all or moſt of their Goodneſs; this Man was a long While in Brewing, and once his Beer did not work in the Barrel for a Month in a very hard Froſt, yet, when the Weather broke, it recovered and fermented well, and afterwards proved very good Drink, but he ſeldom worked his Beer leſs than a Week in the Vat, and never tapped it under three Years.

THIS Way, indeed, is attended with extraordinary Labour and Time, by the Brewer's running off the Wort almoſt continually, and often returning the ſame again into the Maſh-vat; but then it continually gives him

him an Opportunity of extracting and waſhing out the Goodneſs of the Malt, more than any of the common Methods, by which he is capacitated to make his *October* or *March* Beer as ſtrong as he pleaſes. The Fame of *Penly October* Beer is at this Time well known, not only throughout *Hertfordſhire*, but ſeveral other remote Places, and truly not without Deſert; for in all my Travels I never met with any that excelled it, for a clear amber Colour, a fine Reliſh, and a light warm Digeſtion. But what excelled all, was the Generoſity of its Donor, who for Hoſpitality in his Viands, and this *October* Beer, has left but few of his Fellows. I remember his uſual Expreſſion to be, You are welcome to a good Batch of my *October*; and true it was, that he prov'd his Words by his Deeds, for not only the Rich but even the poor Man's Heart was generally made glad, even in Advance, whenever they had any Buſineſs at *Penly*; as expecting a Refreſhment of this Cordial Liquor, that often was accompanied with a good Breakfaſt or Dinner beſides: Which reminds me of a poor Man I met on the Road, who aſked me the Way to ſuch a great Houſe? On telling him, he replied: Ah! Sir, I am almoſt undone, by loſing this Horſe that coſt me above ſeven Pounds; and now I am carrying him to the Hounds, they tell me I ſhall not have a Cup of ſmall Beer given me when I come there.

Of Brewing Moloſſes Beer.

Molosses or Treacle has certainly been formerly made too much Uſe of in the brewing of Stout-beer, common Butt-beers, brown Ales, and ſmall Beer, when Malts have been dear: But it is now prohibited under the Penalty of fifty Pounds for every ten Pounds Weight found in any common Brewhouſe; and as Malts are now about twenty Shillings *per* Quarter, and like to be ſo by the Bleſſing of God, and the Aſſiſtance of that invaluable excellent Liquor for ſteeping Seed-barley in, publiſhed in a late Book, intituled, *The Practical Farmer*, *Page* 25. there is no great Danger of that Impoſition being

rife

riſe again, which in my Opinion was very unwholeſome; becauſe the Brewer was obliged to put ſuch a large Quantity of Treacle into his Water or ſmall Wort to make it ſtrong Beer or Ale, as, very probable, raiſed a Sweating in ſome Degree in the Body of the Drinker: Tho' in ſmall Beer a leſſer Quantity will ſerve; and therefore I have known ſome to brew it in that for their Health's Sake, becauſe this does not breed the Scurvy like Malt-liquors, and at the ſame time will keep open the Pipes and Paſſages of the Lungs and Stomach, for which Purpoſe they put in nine Pounds Weight into a Barrel-copper of cold Water, firſt mixing it well, and boiling it briſkly, with a Quarter of a Pound of Hops or more, one Hour, ſo that it may come off twenty-ſeven Gallons.

A Method practiſed by a Victualler, for Brewing of Ale *or* October Beer, *from* Nottingham.

His Copper holds twenty-four Gallons, and the Maſh-Tub has Room enough for four and more Buſhels of Malt. The firſt full Copper of boiling Water he puts into the Maſh-tub, there to lie a Quarter of an Hour, till the Steam is ſo far ſpent, that he can ſee his Face in it; or, as ſoon as the hot Water is put in, throws a Pail or two of cold Water into it, which will bring it at once into a Temper; then he lets three Buſhels of Malt be run leiſurely into it, and ſtirred or maſhed all the While, but as little as can be, or no more than juſt to keep the Malt from clotting or balling; when that is done, he puts one Buſhel of dry Malt at the Top, to keep in the Vapour or Spirit, and ſo lets it ſtand covered two Hours, or till the next Copper full of Water is boiled hot, which he lades over the Malt or Goods three Hand-bowls full at a Time, that are to run off at the Cock or Tap by a very ſmall Stream before more is put on, which again muſt be returned into the Maſh-tub till it comes off exceeding fine; for, unleſs the Wort is clear when it goes into the Copper, there are little Hopes it will be ſo in the Barrel; which leiſure Way obliges him to be ſixteen Hours in brewing theſe four Buſhels of Malt.

Now

Now between the Ladings over he puts cold Water into the Copper to be boiling hot, while the other is running off; by this Means his Copper is kept up near full, and the Cock ſpending to the End of brewing his Ale or ſmall Beer, of which only twenty-one Gallons muſt be ſaved of the firſt Wort that is reſerved in a Tub, wherein four Ounces of Hops are put, and then it is to be ſet by. For the ſecond Wort I will ſuppoſe there are twenty Gallons of Water in the Copper boiling hot, that muſt be all laded over in the ſame Manner as the former was, but no cold Water need here be mixed; when half of this is run out into a Tub, it muſt be directly put into the Copper with half of the firſt Wort, ſtrained thro' the Brewing-ſieve as it lies on a ſmall looſe wooden Frame over the Copper, to keep back thoſe Hops that were firſt put in to preſerve it, which is to make the firſt Copper twenty-one Gallons; then upon its beginning to boil he puts in a Pound of Hops in one or two Canvaſs or other coarſe Linnen Bags, ſomewhat larger than will juſt contain the Hops, that an Allowance may be given for their Swell; this he boils away very briſkly for half an Hour, when he takes the Hops out and continues boiling the Wort by itſelf till it breaks into Particles a little ragged, and then it is enough, and muſt be diſperſed into the Cooling-tubs very thin: Then put the Remainder of the firſt and ſecond Wort together and boil that, the ſame Time, in the ſame Manner, and with the ſame Quantity of freſh Hops, as the firſt was. The reſt of the Third or ſmall Beer Wort will be about fifteen or twenty Gallons more or leſs, which he mixes directly with ſome cold Water to keep it free of Exciſe, and puts it into the Copper as the firſt Liquor to begin a ſecond Brewing of Ale with another four Buſhels of Malt as he did before, and ſo on for ſeveral Days together if neceſſary; but at laſt there may be ſome ſmall Beer made, tho' ſome will make none, becauſe the Goods or Grains will go the farther in feeding of Hogs.

Obſervations on the foregoing Method.

THE firſt Copper of twenty-four Gallons of Water is but ſufficient to wet three Buſhels of Malt, and by the Additions of cold Water, as the Hot is expended, it matters not how much the Malt drinks up: Tho' a third Part of Water is generally allowed for that Purpoſe that is never returned.

BY the leiſure Putting over the Bowls of Water, the Goodneſs of the Malt is the more extracted and waſhed out, ſo that more Ale may be this Way made, and leſs ſmall Beer, than if the Wort was drawn out haſtily; beſides, the Wort has a greater Opportunity of coming off finer by a ſlow Stream than by a quicker one, which makes this Method excel all others that diſcharge the Wort out of the Maſh-tub more haſtily. Alſo, by the continual Running of the Cock or Tap, the Goods or Grains are out of Danger of ſouring, which often happens in Summer Brewings, eſpecially when the Cock is ſtopt between the ſeveral Boilings of the Wort, and what has been the very Cauſe of damaging or ſpoiling many Guiles of Drink.

THIS Brewer repoſes ſuch a Confidence in the Hops to preſerve the Wort from fixmg, even in the very hotteſt Time in Summer, that he puts all his firſt Running into one Tub, till he has an Opportunity of boiling it; and when Tubs and Room are ſo ſcarce that the Wort is obliged to be laid thick to cool, then the Security of ſome freſh Hops (and not them already boiled or ſoaked) may be put into it, which may be got out again by letting the Drink run thro' the Cullender, and after that a Hair-ſieve, to keep the Seeds of the Hop back as the Drink goes into the Barrel: But this Way of putting Hops into the Cooling-tubs is only meant where there is a perfect Neceſſity, and Tubs and Room enough cannot be had to lay the Wort thin.

BY this Method of Brewing, Ale may be made as ſtrong or as ſmall as is thought fit, and ſo may the ſmall Beer that comes after, and is ſo agreeable, that this

Brewer makes his Ale and ſtrong keeping *October* Beer, all one and the ſame Way, only with this Difference, that the latter is ſtronger and more hopped than the former. Where little or no ſmall Beer is wanted, there may little or none be brewed, according to this Manner of Working; which is no ſmall Conveniency to a little Family that uſes more ſtrong than ſmall; nor is there any Loſs by leaving the Grains in ſome Heart, where Horſes, Cows, Hogs, or Rabbits are kept.

I AM very ſenſible that the vulgar Error, for many Years, has been a Standard Sign to the Ignorant, of boiling ſtrong Worts only till they break or curdle in the Copper, which ſometimes will be in three Quarters of an Hour, or in an Hour or more, according to the Nature of the Malt and Water; but from theſe, in ſome Meaſure, I diſſent, and alſo from thoſe that boil it two or three Hours, for it is certain the longer Worts boil, the thicker they are made, becauſe the watry or thin Parts evaporate firſt away; and the thicker any Drink is boiled, the longer it requires to lie in the Barrel to have its Particles broke, which Age muſt be then the ſole Cauſe of; and therefore I have fixed the Time and Sign to know when the Wort is truly enough, and that in ſuch a Manner, that an ordinary Capacity may be a true Judge of, which hereafter will prevent prodigious Loſſes in the Waſte of ſtrong Worts that have often been boiled away to greater Loſs than Profit.

I HAVE here alſo made known, I think, the true Method of managing the Hop in the Copper, which has long wanted Adjuſting, to prevent the great Damage that longer Boilings of them have been the ſole Occaſion of, to the Spoiling of moſt of our Malt-drinks brewed in this Nation.

CHAP. X.

The Nature and Uſe of the Hop.

THIS Vegetable has ſuffered its Degradation, and raiſed its Reputation the moſt of any other. It formerly being thought an unwholeſome Ingredient, and

till of late a great Breeder of the Stone in the Bladder; but now that fallacious Notion is obviated by Dr. *Quincy* and others, who have proved that Malt-drink, much tinctured by the Hop, is leſs prone to do that Miſchief, than Ale that has fewer boiled in it. Indeed, when the Hop, in a dear Time, is adulterated with Water, in which Aloes, *&c.* have been infuſed, as was practiſed, it is ſaid, about eight Years ago, to make the old ones recover their Bitterneſs and ſeem new, then they are to be looked on as unwholeſome; but the pure new Hop is ſurely of a healthful Nature, compoſed of a ſpirituous floury Part, and a phlegmatic terrene Part; and with the beſt of the Hops I can either make or mar the Brewing; for, if the Hops are boiled in ſtrong or ſmall Worts beyond their fine and pure Nature, the Liquor ſuffers, and will be tanged with a noxious Taſte both ungrateful and unwholeſome to the Stomach; and if boiled to a very great Exceſs, they will be apt to cauſe Reachings, and diſturb a weak Conſtitution. It is for theſe Reaſons that I adviſe the boiling two Parcels of freſh Hops in each Copper of Ale-wort; and, if there were three for keeping Beer, it would be ſo much the better for the Taſte, Health of Body, and longer Preſervation of the Beer in a ſound ſmooth Condition. And, according to this, one of my Neighbours made a Bag, like a Pillow-bear, of the ordinary ſix-penny yard Cloth, and boiled his Hops in it half an Hour; then he took them out, and put in another Bag of the like Quantity of freſh Hops, and boiled them half an Hour more, by which Means he had an Opportunity of boiling both Wort and Hops their due Time, ſaved himſelf the Trouble of ſtraining them thro' a Sieve, and ſecured the Seeds of the Hops at the ſame Time from mixing with the Drink; afterwards he boiled the ſame Bags in his ſmall Beer, till he got the Goodneſs of it out; but obſerve, that the Bags be made bigger than what would juſt contain the Hops, otherwiſe it will be difficult to boil out their Goodneſs. It is true, that here is a Charge increaſed by the Conſumption of a greater

Quantity of Hops than uſual, but then how greatly will they anſwer the deſired End of enjoying fine-palated wholeſome Drink, that in a cheap Time will not amount to much, if bought at the beſt Hand; and, if we conſider their After-Uſe and Benefit in ſmall Beer, there is not any Loſs at all in their Quantity: But, where it can be afforded, the very ſmall Beer would be much improved if freſh Hops were alſo ſhifted in the boiling of this as well as the ſtronger Worts, and then it would be neighbourly Charity to give them away to the poorer Sort. Hence may appear the Hardſhips that many are under of being neceſſitated to drink of thoſe Brewers Malt-liquors, who out of Avarice, boil their Hops to the laſt, that they may not loſe any of their Quinteſſence: Nay, I have known ſome of the little Victualling Brewers ſo ſtupendouſly ignorant, that they have thought they acted the good Huſband, when they have ſqueezed the Hops after they have been boiled to the laſt in ſmall Beer, to get out all their Goodneſs as they vainly imagined; which is ſo reverſe to good Management, that, in my opinion, they had much better put ſome Sort of Earth into the Drink, and it would prove more pleaſant and wholeſome. And why the ſmall Beer ſhould be in this Manner (as I may juſtly call it) ſpoiled, for Want of the trifling Charge of a few freſh Hops, I am a little ſurpriſed at, ſince it is the moſt general Liquor of Families, and therefore as great Care is due to it as any in its Brewing, to enjoy it in a pure and wholeſome Order.

After the Wort is cooled and put into the Working-Vat or Tub, ſome have thrown freſh Hops into it, and worked them with the Yeaſt, at the ſame Time reſerving a few Gallons of raw Wort to waſh the Yeaſt thro' a Sieve to keep back the Hop. This is a good Way where Hops enough have not been ſufficiently boiled in the Wort, or to preſerve it in the Coolers where it is laid thick, otherwiſe I think it needleſs.

When Hops have been dear, many have uſed the Seeds of Wormwood, that they buy in the *London*

Seed-ſhops, inſtead of them: Others *Daucus* or wild Carrot-ſeed, that grows in our common Fields, which many of the poor People in this Country gather and dry in their Houſes againſt their wanting of them: Others that wholeſome Herb *Horehound*, which, indeed, is a fine Bitter, and grows on ſeveral of our Commons.

But, before I conclude this Article, I ſhall take Notice of a Country Bite, as I have already done of a *London* one; and that is, of an arch Fellow that went about to brew for People, and took his Opportunity to ſave all the uſed Hops that were to be thrown away; theſe he waſhed clean, then would dry them in the Sun, or by the Fire, and ſprinkle the Juice of *Horehound* on them, which would give them ſuch a greeniſh Colour and bitteriſh Taſte, that with the Help of a Screw-preſs he would ſell them for new Hops.

Hops in themſelves are known to be a ſubtile grateful Bitter, whoſe Particles are active and rigid, by which the viſcid ramous Parts of the Malt are much divided, that makes the Drink eaſy of Digeſtion in the Body; they alſo keep it from running into ſuch Coheſions as would make it ropy, vapid, and ſour, and therefore are not only of great Uſe in boiled, but in raw Worts to preſerve them ſound till they can be put into the Copper, and afterwards in the Tun while the Drink is working, as I have before hinted.

Here then I muſt obſerve, that the worſer earthy Part of the Hop is greatly the Cauſe of that rough, harſh, unpleaſant Taſte, which accompanies both Ales and Beers that have the Hops ſo long boiled in them, as to tincture their Worts with their miſchievous Effects; for, notwithſtanding the Malt be ever ſo good, the Hops, if boiled too long in them, will be ſo predominant as to cauſe a naſty bad Taſte; and therefore I am in Hopes our Malt-liquors in general will be in great Perfection, when Hops are made Uſe of according to my Directions, and alſo that more Grounds will be planted with this moſt ſerviceable Vegetable than ever, that their Dearneſs may not be a Diſcouragement to this excellent Practice.

For

For I know an Alehouſe-keeper and Brewer, who, to ſave the Expence of Hops that were then two Shillings *per* Pound, uſed but a Quarter inſtead of a Pound, the reſt he ſupplied with *Daucus* Seeds; but to be more particular, in a Mug of this Perſon's Ale I diſcovered three ſeveral Impoſitions. *Firſt*, He underboiled his Wort to ſave his Conſumption. *Secondly*, He boiled this Seed inſtead of the Hop; and, *Thirdly*, He beat the Yeaſt in for ſome Time, to increaſe the Strength of the Drink; and all theſe in ſuch a *Legerdemain* Manner, as gulled and infatuated the ignorant Drinker to ſuch a Degree as not to ſuſpect the Fraud, and that for theſe three Reaſons: *Firſt*, The underboiled Wort, being of a more ſweet Taſte than ordinary, was eſteemed the Produce of a great Allowance of Malt. *Secondly*, The *Daucus* Seed increaſed their Approbation by the fine Peach Flavour or Reliſh that it gives the Drink; and, *Thirdly*, The Yeaſt was not ſo much as thought of, ſince they enjoyed a ſtrong heady Liquor. Theſe artificial Qualities, and, I think, I may ſay, unnatural, have been ſo prevalent with the Vulgar, who were his chief Cuſtomers, that I have known this Victualler have more Trade for ſuch Drink than his Neighbours, who had much more wholeſome at the ſame Time; for the *Daucus* Seed, tho' it is a Carminative, and has ſome other good Properties, yet in the unboiled Wort it is not capable of doing the Office of the Hop, in breaking thro' the clammy Parts of it; the Hop being full of ſubtle penetrating Qualities, a Strengthener of the Stomach, and makes the Drink agreeable, by oppoſing Obſtructions of the *Viſcera*, and particularly of the Liver and Kidnies, as the Learned maintain, which confutes the old Notion, that Hops are a Breeder of the Stone in the Bladder.

CHAP. XI.

Of Boiling Malt-Liquors.

Altho' I have ſaid an Hour and a half is requiſite for boiling of *October* Beer, and an Hour for Ales and ſmall Beer; yet it is to be obſerved, that an exact

Time is not altogether a certain Rule in this Caſe with ſome Brewers; for, when looſe Hops are boiled in the Wort ſo long till they all ſink, their Seeds will ariſe and fall down again; the Wort alſo will be curdled, and broke into ſmall Particles if examined in a Hand-bowl, but afterwards into larger, as big as great Pins Heads, and will appear clean and fine at the Top. This is ſo much a Rule with ſome, that they regard not Time, but this Sign, to ſhew when the Wort is boiled enough; and this will happen ſooner or later, according to the Nature of the Barley, and its being well malted; for, if it comes off Chalks or Gravels, it generally has the good Property of breaking or curdling ſoon; but, if off tough Clays, then it is longer, which by ſome Perſons is not a little valued, becauſe it ſaves Time in Boiling, and conſequently the Conſumption of the Wort.

It is alſo to be obſerved, that pale Malt Worts will not break ſo ſoon in the Copper, as the brown Sorts; but, when either of their Worts boil, it ſhould be to the Purpoſe, for then they will break ſooner, and waſte leſs than if they are kept ſimmering, and will likewiſe work more kindly in the Tun, drink ſmoother, and keep longer.

Now all Malt Worts may be ſpoiled by too little or too much Boiling; if too little, then the Drink will always taſte raw, mawkiſh, and be unwholeſome in the Stomach, where, inſtead of helping to dilute and digeſt our Food, it will cauſe Obſtructions, Cholics, Head-achs, and other Misfortunes: Beſides, all ſuch under-boiled Drinks are certainly expoſed to Staleneſs and Sourneſs, much ſooner than thoſe that have had their full Time in the Copper. And, if they are boiled too long, they will then thicken (for one may boil a Wort to a Salve) and not come out of the Copper fine and in a right Condition, which will cauſe it never to be right clear in the Barrel; an *Item* ſufficient to ſhew the Miſtake of all thoſe that think to excel in Malt-Liquors, by boiling them two or three Hours, to the great Confuſion of the Wort, and doing more Harm than Good to the Drink.

But to be more particular in thoſe two Extreams, it is my Opinion, as I have ſaid before, that no Ale Worts, boiled leſs than an Hour, can be good, becauſe in an Hour's Time they cannot acquire a Thickneſs of Body any Ways detrimental to them, and in leſs than an Hour, the ramous viſcid Parts of the Ale cannot be ſufficiently broke and divided, ſo as to prevent its running into Coheſions, Ropineſs, and Sourneſs, becauſe in Ales there are not Hops enough allowed to do this, which good Boiling muſt in a great Meaſure ſupply, or elſe ſuch Drink, I am ſure, can never be agreeable to the Body of Man; for then its coheſive Parts, being not thoroughly broke and comminuted by Time and Boiling, remain in a hard Texture of Parts, which conſequently obliges the Stomach to work more than ordinary to digeſt and ſecrete ſuch parboiled Liquor, that Time and Fire ſhould have cured before: Is not this apparent in half-boiled Meats, or under-baked Bread, that often cauſes the Stomach a great Fatigue to digeſt, eſpecially in thoſe of a ſedentary Life? And if that ſuffers, it is certain the whole Body muſt ſhare in it: How ignorant then are thoſe People, who, in tippling of ſuch Liquor, can praiſe it for excellent good Ale, as I have been an Eye-witneſs of, and only becauſe its Taſte is ſweetiſh (which is the Nature of ſuch raw Drinks) as believing it to be the pure Effect of the genuine Malt, not perceiving the Landlord's Avarice and Cunning to ſave the Conſumption of his Wort by Shortneſs of Boiling, though to the great Prejudice of the Drinker's Health; and becauſe a Liquid does not afford ſuch a plain ocular Demonſtration, as Meat and Bread does, theſe deluded People are taken into an Approbation of, indeed, an *Ignis fatuus*, or what is not.

To come then to the *Criſis* of the Matter, both Time and the Curdling or Breaking of the Wort ſhould be conſulted; for if a Perſon was to boil the Wort an Hour, and then take it out of the Copper, before it was rightly broke, it would be wrong Management, and the Drink would not be fine and wholeſome; and

if

if it ſhould boil an Hour and a half, or two Hours, without regarding when its Particles are in a right Order, then it may be too thick, ſo that due Care muſt be had to the two Extreams, to obtain it in its due Order; therefore, in *October* and keeping Beers, an Hour and a Quarter's good Boiling is commonly ſufficient to have a thorough cured Drink, for generally in that Time it will break and boil enough, becauſe in this there is a double Security by Length of Boiling, and a Quantity of Hops ſhifted; but in the new Way there is only a ſingle one, and that is by a double or treble Allowance of freſh Hops boiled only half an Hour in the Wort; and for this Practice a Reaſon is aſſigned, that the Hops, being endowed with diſcutient apertive Qualities, will, by them and their great Quantity, ſupply the Defect of underboiling the Wort; and that a farther Conveniency is here enjoyed by having only the fine, wholeſome, ſtrong, floury, ſpirituous Parts of the Hop in the Drink, excluſive of the phlegmatic, naſty, earthy Parts which would be extracted, if the Hops were to be boiled above half an Hour; and therefore there are many now that are ſo attached to this new Method, that they won't brew Ale or *October* Beer any other Way, vouching it to be a true Tenet, that, if Hops are boiled above thirty Minutes, the Wort will have ſome or more of their worſer Quality.

The Allowance of Hops, for Ale, or Beer, cannot be exactly adjuſted without coming to Particulars, becauſe the Proportion ſhould be according to the Nature and Quality of the Malt, the Seaſon of the Year it is brewed in, and the Length of Time it is to be kept.

For ſtrong brown Ale brewed in any of the Winter Months, and boiled an Hour, one Pound is but barely ſufficient for a Hogſhead, if it be tapped in three Weeks or a Month.

If for pale Ale brewed at that Time, and for that Age, one Pound and a Quarter of Hops; but, if theſe Ales are brewed in any of the Summer Months, there ſhould be more Hops allowed,

For

For *October* or *March* brown Beer, a Hogſhead made from eleven Buſhels of Malt, boiled an Hour and a Quarter to be kept nine Months, three Pounds and a half ought to be boiled in ſuch Drink at the leaſt.

For *October* or *March* pale Beer, made from fourteen Buſhels, boiled an Hour and a Quarter, and kept twelve Months, ſix Pounds ought to be allowed to a Hogſhead of ſuch Drink, and more if the Hops are ſhifted in two Bags, and leſs Time given the Wort to boil.

Now thoſe that are of Opinion, that their Beers and Ales are greatly improved by boiling the Hops only half an Hour in the Wort, I join in Sentiment with them, as being very ſure, by repeated Experience, it is ſo; but I muſt here take Leave to diſſent from thoſe that think that half an Hour's boiling the Wort is full enough for making right ſound and well reliſhed Malt Drinks: However, of this I have amply and more particularly wrote in my *Second Book of Brewing*, in Chapter IV. where I have plainly publiſhed the true Sign or Criterion to know when the Wort is boiled juſt enough.

CHAP. XII.

Of Foxing or Tainting Malt-Liquors.

FOXING is a Misfortune, or rather a Diſeaſe in Malt Drinks, occaſioned by divers Means, as the Naſtineſs of the Utenſils, putting the Worts too thick together in the Backs or Coolers, Brewing too often and ſoon one after another, and ſometimes by bad Malts and Waters, and the Liquors taken in wrong Heats, being of ſuch pernicious Conſequence to the great Brewer in particular, that he ſometimes cannot recover and bring his Matters into right Order again under a Week or two, and is ſo hateful to him in its very Name, that it is a general Law among them to make all Servants that name the Word *Fox* or *Foxing* in the Brew-

Brew-houſe to pay Six-pence, which obliges them to call it *Reynard*; for, when once the Drink is tainted, it may be ſmelt at ſome Diſtance ſomewhat like a *Fox*: It chiefly happens in hot Weather, and cauſes the Beer and Ale ſo tainted to acquire a fulſome ſickiſh Taſte, that will, if it is received in a great Degree, become ropy like Treacle, and in ſome ſhort Time turn ſour. This I have known ſo to ſurpriſe my ſmall Beer Cuſtomers, that they have aſked the Drayman what was the Matter: He, to act in his Maſter's-Intereſt, tells them a Lye, and ſays, it is the Goodneſs of the Malt that cauſes that ſweetiſh mawkiſh Taſte, and then would brag at Home how cleverly he came off. I have had it alſo in the Country more than once, and that by the Idleneſs and Ignorance of my Servant, who, when a Tub has been rinſed out only with fair Water, has ſet it by for a clean one; but this will not do with a careful Maſter, for I oblige him to clean the Tub with a Hand-bruſh, Aſhes, or Sand, every Brewing, and ſo that I cannot ſcrape any Dirt up under my Nail. However, as the Cure of this Diſeaſe has baffled the Efforts of many, I have been tempted to endeavour the finding out a Remedy for the great Malignity, and ſhall deliver the beſt I know on this Score.

And here I ſhall mention the great Value of the Hop in preventing and curing the Fox in Malt-Liquors. When the Wort is run into the Tub out of the Maſhing-vat, it is a very good Way to throw ſome Hops directly into it before it is put into the Copper, and they will ſecure it againſt Sourneſs and Ropineſs, that are the two Effects of foxed Worts or Drinks, and are of ſuch Power in this Reſpect, that raw Worts may be kept ſome Time, even in hot Weather, before they are boiled, and which is neceſſary where there is a large Quantity of Malt uſed to a little Copper; but it is certain, that the ſtronger Worts will keep longer with Hops than the ſmaller Sorts: So likewiſe if a Perſon has fewer Tubs than are wanting, and he is apprehenſive his Worts will be foxed by too thick lying in the Coolers

Coolers or working Tubs, then it will be a ſafe Way to put ſome freſh Hops into ſuch Tubs, and work them with the Yeaſt, as I have before hinted; or, in caſe the Drink is already foxed in the Fat or Tun, new Hops ſhould be put in and work'd with it, and they will greatly fetch it again into a right Order; but then ſuch Drink ſhould be carefully taken clear off from its groſs naſty Lee, which being moſtly tainted, would otherwiſe lie in the Barrel, corrupt, and make it worſe.

Some will ſift quick Lime into foxed Drinks while they are working in the Tun or Vat, that its Fire and Salt may break the Coheſions of the Beer or Ale, and burn away the Stench that the Corruption would always cauſe; but then ſuch Drink ſhould by a Peg at the Bottom of the Vat be drawn off as fine as poſſible, and the Dregs left behind.

There are many that do not conceive how their Drinks become foxed and tainted for ſeveral Brewings together; but I have, in Chap. VI. in my Second Book, made it appear, that the Taint is chiefly retained and lodged in the upright wooden Pins that faſten the Planks to the Joiſts, and that ſcalding Lee is a very efficacious Liquor to extirpate it out of the Utenſils in a little Time, if rightly applied; and another moſt powerful Ingredient that is now uſed by the greateſt Artiſts for curing of the ſame.

CHAP. XIII.

Of Fermenting and Working of Beers and Ales, and the pernicious Practice of beating in the Yeaſt detected.

THIS Subject, in my Opinion, has long wanted a ſatyrical Pen, to ſhew the ill Effects of this unwholeſome Method, which I ſuppoſe has been much diſcourag'd and hinder'd hitherto, from the general Uſe it has been under many Years, eſpecially by the Northern Brewers, who, tho' much fam'd for their Knowledge

ledge in this Art, and have induced many others by their Example, in the Southern, and other Parts, to purſue their Method; yet I ſhall endeavour to prove them culpable of Male-practice, that beat in the Yeaſt, as ſome of them have done a Week together; and that Cuſtom ought not to authoriſe an ill Practice. *Firſt*, I ſhall obſerve, that Yeaſt is a very ſtrong Acid, that abounds with ſubtile ſpirituous Qualities, whoſe Particles, being wrapped up in thoſe that are viſcid, are, by a Mixture with them in the Wort, brought into an inteſtine Motion, occaſioned by Particles of different Gravities; for, as the ſpirituous Parts of the Wort will be continually ſtriving to get up to the Surface, the glutinous adheſive ones of the Yeaſt will be as conſtant in retarding their Aſcent, and ſo prevent their Eſcape; by which the ſpirituous Particles are ſet looſe and free from their viſcid Confinements, as may appear by the Froth on the Top; and to this End a moderate Warmth haſtens the Operation, as it aſſiſts in opening the Viſcidities in which ſome ſpirituous Parts may be entangled, and unbends the Spring of the included Air: The viſcid Parts which are raiſed to the Top, not only on Account of their own Lightneſs, but by the continual Efforts and Occurſions of the Spirits to get uppermoſt, ſhew when the Ferment is at the higheſt, and prevent the finer Spirits making their Eſcape; but, if this inteſtine Operation is permitted to continue too long, a great deal will get away, and the remaining grow flat and vapid, as Dr. *Quincy* well obſerves.

Now tho' a ſmall Quantiry of Yeaſt is neceſſary to break the Band of Corruption in the Wort, yet it is in itſelf of a poiſonous Nature, as many other Acids are; for if a Plaiſter of thick Yeaſt be applied to the Wriſt, as ſome have done for an Ague, it will there raiſe little Puſtles or Bliſters, in ſome Degree, like that venomous Ingredient *Cantharides*, which is one of the Shop Poiſons. Here then, I ſhall obſerve, that I have known ſeveral beat the Yeaſt into the Wort for a Week, or more, together, to improve it; or, in plainer Terms,

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to load the Wort with its weighty and ſtrong ſpirituous Particles; and that for two Reaſons; *Firſt*, Becauſe it will make the Liquor ſo heady, that five Buſhels of Malt may be equal in Strength to ſix, and that by the ſtupifying narcotic Qualities of the Yeaſt; which mercenary Subtlety and Impoſition has ſo prevailed, to my Knowledge, with the Vulgar and Ignorant, that it has cauſed many of them to return the next Day to the ſame Ale-houſe, as believing they had ſtronger and better Drink than others: But, alas, how are ſuch deceived, that know no other than that it is the pure Product of the Malt, when at the ſame Time they are driving Nails into their Coffins, by impregnating their Blood with the corrupt Qualities of this poiſonous Acid, as many of its Drinkers have proved, by ſuffering violent Head-achs, Loſs of Appetite, and other Inconveniencies the Day following, and ſometimes longer, after a Debauch of ſuch Liquor; who would not, perhaps, for a great Reward, ſwallow a Spoonful of thick Yeaſt by itſelf, and yet, without any Concern, may receive, for aught they know, ſeveral diſſolved in the Vehicle of Ale, and then the corroſive Corpuſcles of the Yeaſt, being mixed with the Ale, cannot fail (when forſaken in the Canals of the Body of their Vehicle) to do the ſame Miſchief as they would if taken by themſelves undiluted, only with this Difference, that they may in this Form be carried ſometimes further in the animal Frame, and ſo diſcover their Malignity in ſome of the inmoſt Receſſes thereof, which alſo is the very Caſe of malignant Waters, as a moſt learned Doctor obſerves.

2*dly*, They alledge for beating the Yeaſt into Wort, that it gives it a fine Tang or Reliſh, or, as they call it at *London*, it makes the Ale bite of the Yeaſt; but this Flouriſh, indeed, is for no other Reaſon than to further its Sale; and tho' it may be agreeable to ſome Bigots, to me it proves a Diſcovery of the Infection, by its nauſeous Taſte; however, my Surprize is leſſened, when I remember the *Plymouth* People, who are quite

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the Reverſe of them at *Dover* and *Chatham*; for the firſt are ſo attached to their white thick Ale, that many have undone themſelves by drinking it; nor is their Humour much different as to the common Brewers brown Ale, who, when the Cuſtomer wants a Hogſhead, they put in immediately a Handful of Salt, and another of Flour, and ſo bring it up; this is no ſooner on the Stilling but often tapped, that it may carry a Froth on the Top of the Pot, otherwiſe they deſpiſe it: The Salt commonly anſwered its End of cauſing the Tiplers to become drier by the great Quantities they drank, that it farther excited by the biting, pleaſant, ſtimulating Quality the Salt ſtrikes the Palate with. The Flour alſo has its ſeducing Share, by pleaſing the Eye and Mouth with its mantling Froth, ſo that the Sailors, that are often here in great Numbers, uſed to conſume many Hogſheads of this common Ale with much Delight, as thinking it was intirely the pure Product of the Malt.

THEIR white Ale is a clear Wort made from pale Malt, and fermented with what they call *Ripening*, which is a Compoſition, they ſay, of the Flour of Malt, Yeaſt, and Whites of Eggs, a *Noſtrum* made and ſold only by two or three in thoſe Parts, but the Wort is brewed and the Ale vended by many of the Publicans, which is drank while it is fermenting in earthen Steens, in ſuch a thick Manner as reſembles buttered Ale, and ſold for Two-pence Half-penny the full Quart. It is often preſcribed by Phyſicians to be drank by Wet-nurſes for the Increaſe of their Milk, and alſo as a prevalent Medicine for the Cholic and Gravel. But the *Dover* and *Chatham* People will not drink their Butt-beer, unleſs it is aged, fine, and ſtrong.

Of working and fermenting London *Stout Beer and Ale.*

IN my Brewhouſe at *London*, the Yeaſt at once was put into the Tun to work the Stout-beer and Ale with, as not having the Conveniency of doing otherwiſe, by Reaſon the After-worts of ſmall Beer come into the ſame Backs or Coolers where the ſtrong Worts had juſt been;

been; by this Means, and the Shortneſs of Time we have to ferment our ſtrong Drinks, we cannot make Reſerves of cold Worts to mix with and check the too forward Working of thoſe Liquors, for there we brewed three Times a Week throughout the Year, as moſt of the great ones do in *London*, and ſome others five Times. The ſtrong Beer brewed for Keeping is ſuffered to be Blood-warm in the Winter, when the Yeaſt is put into it, that it may gradually work two Nights and a Day at leaſt, for this will not admit of ſuch a haſty Operation as the common brown Ale will, becauſe, if it is worked too warm and haſty, ſuch Beer will not keep near ſo long as that fermented cooler. The brown Ale has, indeed, its Yeaſt put into it in the Evening very warm, becauſe they carry it away the very next Morning early to their Cuſtomers, who commonly draw it out in leſs than a Week's Time. The Pale or Amber Ales are often kept near it, not quite a Week under Fermentation, for the better incorporating the Yeaſt with the Wort, by beating it in ſeveral Times for the foregoing Reaſons.

Of Working and Fermenting Drinks brewed by private Families.

I MEAN ſuch who brew only for their own Uſe, whether it be a private Family or a Victualler. In this Caſe, be it for Stout Beers, or for any of the Ales, the Way that is uſed in *Northamptonſhire*, and by good Brewers elſewhere, is, to put ſome Yeaſt into a ſmall Quantity of warm Wort in a Hand-bowl, which for a little While ſwims on the Top, where it works out, and leiſurely mixes with the Wort, that is firſt quite cold in Summer, and almoſt ſo in Winter; for, the cooler it is worked, the longer it will keep, too much Heat agitating the ſpirituous Particles into too quick a Motion, whereby they ſpend themſelves too faſt, or fly away too ſoon, and then the Drink will certainly work into a bliſtered Head that is never natural; but when it ferments, by moderate Degrees, into a fine, white curled Head, its Operation is then truly genuine, and

plainly ſhews the right Management of the Brewer. To one Hogſhead of Beer, that is to be kept nine Months, I put a Quart of thick Yeaſt, and ferment it as cool as it will admit of, two Days together, in *October* or *March*, and, if I find it works too faſt, I check it at Leiſure by ſtirring in ſome raw Wort with a Hand-bowl: So likewiſe, in our Country Ales, we take the very ſame Method, becauſe of having them kept ſome Time; and this is ſo nicely obſerved by ſeveral, that I have ſeen them do the very ſame by their ſmall Beer Wort; now, by theſe ſeveral Additions of raw Wort, there are as often new Commotions raiſed in the Beer or Ale, which cannot but contribute to the Rarefaction and Comminution of the Whole; but whether it is by theſe joining Principles of the Wort and Yeaſt, that the Drink is rendered ſmoother, or that the ſpirituous Parts are more entangled, and kept from making their Eſcape, I can't determine; yet ſure it is, that ſuch ſmall Liquors generally ſparkle and knit out of the Barrel, as others out of a Bottle, and is as pleaſant Ale as ever I drank. Others again, for Butt or Stout-beer, will, when they find it works up towards a thick Yeaſt, mix it once, and beat it again with the Hand-bowl or Jett; and, when it has worked up a ſecond Time in ſuch Manner, they put it into the Veſſel with the Yeaſt on the Top, and the Sediments at the Bottom, taking particular Care to have ſome more in a Tub near the Caſk, to fill it up as it works over, and, when it has done Working, leave it with a thick Head of Yeaſt on to preſerve it.

BUT, for Ale that is not to be kept very long, they hop it accordingly, and beat the Yeaſt in every four or five Hours, for two Days ſucceſſively, in the warm Weather, and four in the Winter, till the Yeaſt begins to work heavy, and ſticks to the heavy Part of the Bowl, if turned down on the ſame; then they take all the Yeaſt off at the Top, and leave all the Dregs behind, putting only up the clear Drink; and, when it is a little worked in the Barrel, it will be fine in a few Days, and ready for drinking. But this laſt Way of beating in the

Yeaſt too long, I think, I have ſufficiently detected, and hope, as it is now declining, it will never revive again; and, for which Reaſon, I have in my *Second Book* encouraged all light Fermentations, as the moſt natural for the Malt-liquors and the human Body.

Of Forwarding and Retarding the Fermentation of Malt-Liquors.

In Caſe Beer or Ale is backward in Working, it is often practiſed, to caſt ſome Flour out of the Duſting-box, or with the Hand over the Top of the Drink, which will become a Sort of Cruſt or Cover to help to keep the Cold out: Others will put in one or two Ounces of powdered Ginger, which will ſo heat the Wort as to bring it forward: Others will take a Gallon Stone Bottle and fill it with boiling Water, which, being well corked, is put into the Working-tub, where it will communicate a gradual Heat for ſome Time, and forward the Fermentation: Others will reſerve ſome raw Wort, which they heat and mix with the reſt; but then due Care muſt be taken, that the Pot in which it is heated has no Manner of Greaſe about it, leſt it impedes, inſtead of promoting the Working; and, for this Reaſon, ſome nice Brewers will not ſuffer a Candle too near the Wort, leſt it drop into it. But, for retarding and keeping back any Drink that is too much heated in working, the cold raw Wort, as I have ſaid before, is the moſt proper of any Thing to check it with, tho' I have known ſome to put one or more Pewter Diſhes into it for that Purpoſe; or, it may be broke into ſeveral other Tubs, where, by its ſhallow Lying, it will be taken off its Fury. Others again, to make Drink work, that is backward, will take the Whites of two Eggs, and beat them up with half a Quartern of good Brandy, and put it either into the Working-vat, or into the Caſk, and it will quickly bring it forward, if a warm Cloth is put over the Bung. Others will tie up Bran in a coarſe thin Cloth, and put it into the Vat, where, by its ſpongy and floury Nature, and cloſe Bulk,

it will abſorb a Quantity of the Drink, and breed a Heat to forward its Working.

I KNOW an Inn-keeper, of a great Town in *Bucks*, that is ſo curious, as to take off all the Top-yeaſt firſt, and then, by a Peg near the Bottom of his Working-tub, he draws off the Beer or Ale, ſo that the Dregs are by this Means left behind. This, I muſt own, is very right, in Ales that are to be drank ſoon; but in Beers, that are to lie nine or twelve Months in a Butt or other Caſk, there certainly will be wanted ſome *Fæces* or Sediments for the Beer to feed on, elſe it muſt conſequently grow hungry, ſharp, and eager; and therefore, if its own Top or Bottom are not put into a Caſk with the Beer, ſome other Artificial Compoſition, or Lee, ſhould ſupply its Place, that is wholeſomer, and will better feed with ſuch Drink, than its own natural Settlement; and, therefore, I have here inſerted ſeveral curious Receipts for anſwering this general End.

CHAP. XIV.

Of an artificial Lee for Stout or Stale Beer to feed on.

THIS Article, as it is of very great Importance in the curing of our Malt-Liquors, requires a particular Regard to this laſt Management of them, becauſe, in my Opinion, the general Misfortune of the Butt or Keeping-beers drinking ſo hard and harſh, is partly owing to the naſty foul *Fæces* that lie at the Bottom of the Caſk, compounded of the Sediments of Malt, Hops, and Yeaſt, that are all clogged with groſs rigid Salts, which, by their long lying in the Butt or other Veſſel, ſo tinctures the Beer, as to make it partake of all their raw Natures: For, as is the Feed, ſuch is the Body; as may be perceived by Eels taken out of dirty Bottoms, that are ſure to have a muddy Taſte, when the Silver Sort, that are catched in gravelly or ſandy clear Rivers, eat ſweet and fine: Nor can this

this ill Property be a little, in thoſe Starting (as they call it in *London*) new thick Beers, that were carried directly from my Brew-houſe, and, by a Leather Pipe or Spout, conveyed into the Butts as they ſtood in the Cellar, which I ſhall farther demonſtrate by the Example of whole Wheat, that is, by many, put into ſuch Beer to feed and preſerve it, as being reckoned a ſubſtantial Alcali; however, it has been proved, that ſuch Wheat in about three Years Time has eat into the very Wood of the Caſk, and there Honey-combed it, by making little hollow Cavities in the Staves. Others there are, that will hang a Bag of Wheat in the Veſſel, that it may not touch the Bottom; but, in both Caſes, the Wheat is diſcovered to abſorb and collect the ſaline acid Qualities of the Beer, Yeaſt and Hop, by which it is impregnated with their ſharp Qualities; as a Toaſt of Bread is put into Punch or Beer, whoſe alcalous hollow Nature will attract and make a Lodgment of the acid ſtrong Particles in either, as is proved by eating the inebriating Toaſt; and therefore the *Frenchman* ſays, the *Engliſh* are right in putting a Toaſt into the Liquor, but are Fools for eating it: Hence it is, that ſuch whole Wheat is loaded with the Qualities of the unwholeſome Settlements or Grounds of the Beer, and becomes of ſuch a corroding Nature, as to do this Miſchief; and, for that Reaſon, ſome in the *North* will hang a Bag of the Flour of malted Oats, Wheat, Peaſe, and Beans, in the Veſſels of Beer, as being a lighter and mellower Body than the whole Wheat or its Flour, and more natural to the Liquor: But whether it be raw Wheat or malted, it is ſuppoſed, after this Receptacle has emitted its alcalous Properties to the Beer, and taken in all it can of the acid Qualities thereof, that ſuch Beer will by Length of Age prey upon that again, and ſo communicate its pernicious Effects to the Body of Man, as Experience ſeems to juſtify, by the many ſad Examples that I have ſeen in the Deſtruction of ſeveral luſty Brewers Servants, who formerly ſcorned what they then called *Flux Ale*, to

the Preference of ſuch corroding conſuming ſtale Beers; and therefore I have hereafter adviſed, that ſuch Butt or Keeping-beers be tapped at nine or twelve Months End at fartheſt, and then an artificial Lee will have a due Time allowed it, to do Good and not Harm.

An excellent Compoſition for feeding Butt or Keeping-Beers with.

TAKE a Quart of *French* Brandy, or as much of *Engliſh*, that is free from any burnt Tang, or other ill Taſte, and is full Proof; to this put as much Wheat or Bean-flour as will knead it into Dough, put it in long Pieces into the Bung-hole, as ſoon as the Beer has done Working or afterwards, and let it gently fall Piece by Piece to the Bottom of the Butt; this will maintain the Drink in a mellow Freſhneſs, keep Staleneſs off for ſome Time, and cauſe it to be the ſtronger as it grows aged.

ANOTHER.

TAKE one Pound of Treacle, or Honey, one Pound of the Powder of dried Oyſter-ſhells, or fat Chalk, mix them well, and put it into a Butt, as ſoon as it has done Working, or ſome Time after, and bung it well; this will both fine and preſerve the Beer in a ſoft, ſmooth, Condition for a great While.

ANOTHER.

TAKE a Peck of Egg-ſhells, and dry them in an Oven, break and mix them with two Pounds of fat Chalk, and mix them with Water, wherein four Pounds of coarſe Sugar have been boiled, and put it into the Butt as aforeſaid.

To fine and preſerve Beers and Ales, by boiling an Ingredient in the Wort.

THIS moſt valuable Way I frequently follow, both for Ale, Butt-Beer, and ſmall Beer; and that is, in each Barrel Copper of Wort, I put in a Pottle, or two Quarts

Quarts of whole Wheat as ſoon as I can, that it may ſoak before it boils, then I ſtrain it thro' a Sieve; when I put the Wort in Cooling-tubs, and, if it is thought fit, the ſame Wheat may be boiled in a ſecond Copper: Thus there will be extracted a gluey Conſiſtence, which being incorporated with the Wort by boiling, gives it a more thick and ponderous Body, and, when in the Caſk, ſoon makes a Sediment or Lee, as the Wort is more or leſs loaded with the weighty Particles of this ſizy Body; but if ſuch Wheat was firſt parched, or baked in an Oven, it would do better, as being rather too raw as it comes from the Ear.

Another Way.

A Woman, who lived at *Leighton Buzzard* in *Bedfordſhire*, and had the beſt Ale in the Town, once told a Gentleman, ſhe had Drink juſt done Working in the Barrel, and before it was bunged would wager it was fine enough to drink out of a Glaſs, in which it ſhould maintain a little While a high Froth; and it was true, for the Ivory-ſhavings, that ſhe boiled in the Wort, were the Cauſe of it, which an Acquaintance of mine accidentatly had a View of, as they lay ſpread over the Wort in the Copper; ſo will Hartſhorn-ſhavings do the ſame and better, both of them being great Finers and Preſervers of Malt-liquors againſt Staleneſs and Sourneſs, and are certainly of a very alcalous Nature. Or, if they are put into a Caſk when you bung it down, it will be of Service for that Purpoſe; but theſe are dear in Compariſon of the whole Wheat, which will in a great Meaſure ſupply their Place, and after it is uſed may be given to a poor Body, or to the Hog.

To ſtop the Fret in Malt-Liquors.

Take a Quart of black Cherry-brandy, and pour it in at the Bung-hole of the Hogſhead, and ſtop it cloſe.

To recover deadiſh Beer.

When ſtrong Drink grows flat, by the Loſs of its Spirits, take four or five Gallons out of a Hogſhead, and

boil it with five Pounds of Honey, ſkim it, and, when cold, put it to the reſt, and ſtop it up cloſe: This will make it pleaſant, quick, and ſtrong.

To make ſtale Beer drink new.

TAKE the Herb *Horehound*, ſtamp it and ſtrain it, then put a Spoonful of the Juice (which is an extreme good Pectoral) to a Pitcher full of Beer, let it ſtand covered about two Hours and drink it.

To fine Malt-Liquors.

TAKE a Pint of Water, half an Ounce of unſlacked Lime, mix them well together; let it ſtand three Hours, and the Lime will ſettle to the Bottom, and the Water be as clear as Glaſs; pour the Water from the Sediment, and put it into your Ale or Beer; mix it with half an Ounce of Iſing-glaſs, firſt cut ſmall and boiled, and in five Hours Time, or leſs, the Beer in the Barrel will ſettle and clear.

THERE are ſeveral other Compoſitions that may be uſed for this Purpoſe, but none, that I ever heard of, will anſwer like thoſe moſt excellent Balls that Mr. *Ellis*, of *Little Gaddeſden* in *Hertfordſhire*, has found out by his own Experience to be very great Refiners, Preſervers, and Reliſhers of Malt-Liquors and Cyders; and will alſo recover damaged Drinks, as I have mentioned in my *Second Book*, where I have given a farther Account of ſome other Things that will fine, colour and improve Malt-drinks. See the Receipt for the Balls in the *Supplement*, Chap. VI.

CHAP. XV.

Of ſeveral pernicious Ingredients put into Malt-Liquors to increaſe their Strength.

MALT-Liquors, as well as ſeveral others, have long lain under the Diſreputation of being adulterated and greatly abuſed by avaricious and ill-principled People, to augment their Profits at the Expence

of

of the precious Health of human Bodies, which, tho' the greateſt Jewel in Life, is ſaid to be too often loſt by the Deceit of the Brewer, and the Intemperance of the Drinker: This undoubtedly was one, and I believe the greateſt, of the Lord *Bacon*'s Reaſons for ſaying, he thought not one *Engliſhman* in a Thouſand died a natural Death. Nor is it indeed to be much wondered at, when, according to Report, ſeveral of the Publicans make it their Buſineſs to ſtudy and practiſe this Art: Witneſs what I am afraid is too true, that ſome have made Uſe of the *Coculus India* Berry for making Drink heady, and ſaving the Expence of Malt; but as this is a violent Poiſon by its narcotic ſtupifying Quality, if taken in too large a Degree, I hope this will be rather a Prevention of its Uſe than an Invitation, it being ſo much of the Nature of the deadly Nightſhade, that it bears the ſame Character; and I am ſure the latter is bad enough; for one of my Neighbour's Brothers was killed by eating its Berries that grow in ſome of our Hedges, which ſo nearly reſemble the black Cherry, that the Boy took the Wrong for the Right.

THERE is another ſiniſter Practice ſaid to be frequently uſed by ill Perſons to ſupply the full Quantity of Malt, and that is *Coriander* Seeds: This alſo is of a heady Nature boiled in the Wort, one Pound of which will anſwer to a Buſhel of Malt, as was ingenuouſly confeſſed to me by a Gardener, who owned he ſold a great deal of it to Alehouſe Brewers (for I do not ſuppoſe the great Brewer would be concerned in any ſuch Affair) for that Purpoſe, at Ten-pence *per* Pound; but how wretchedly ignorant are thoſe that make Uſe of it, not knowing the Way firſt to cure and prepare it for this and other Mixtures, without which it is a dangerous Thing, and will cauſe Sickneſs in the Drinkers of it? Others are ſaid to make Uſe of Lime-ſtones to fine and preſerve the Drink: But, to come off the faireſt in ſuch foul Artifices, it has been too much a general Practice to beat the Yeaſt ſo long into the Ale, that without Doubt it has done great Prejudice to the

Healths

Healths of many others, beſides the Perſon I have writ of in the *Preface* of my *Second Book*. For the Sake then of Seller and Buyer, I have here offered ſeveral valuable Receipts for fining, preſerving, and mellowing Beers and Ales, in ſuch a true, healthful, and beneficial Manner, that from henceforth, after the Peruſal of this Book, and the Knowledge of their Worth is fully known, no Perſon, I hope, will be ſo ſordidly obſtinate as to have any Thing to do with ſuch unwholeſome Ingredients; becauſe theſe are not only of the cheapeſt Sort, but will anſwer their End and Purpoſe; and the rather, ſince Malts are now only twenty Shillings *per* Quarter, and like to hold a low Price for Reaſons that I could here aſſign.

I own, I formerly thought they were too valuable to expoſe to the Public, by Reaſon of their Cheapneſs and great Vertues, as being moſt of them wholeſomer than the Malt itſelf, which is but a corrupted Grain: But as I hope they will do conſiderable Service in the World towards having clear, ſalubrious, and pleaſant Malt-Liquors in moſt private Families and Alehouſes, I have my Satisfaction.

CHAP. XVI.

Of the Cellar or Repoſitory for Keeping Beers and Ales.

IT is certain by long Experience, that the Weather or Air has not only a Power or Influence in Brewings, but alſo after the Drink is in the Barrel, Hogſhead, or Butt, in Cellars, or other Places, which is often the Cauſe of forwarding or retarding the Fineneſs of Malt-Liquors; for if we brew in cold Weather, and the Drink is to ſtand in a Cellar of Clay, or where Springs riſe, or Waters lie or paſs through, ſuch a Place, by Conſequence, will check the due Working of the Drink, chill, flat, deaden, and hinder it from becoming fine. So likewiſe, if Beer or Ale is brewed in hot Weather and put into chalky, gravelly, or ſandy Cellars,

Cellars, and eſpecially if the Windows open to the South, South-Eaſt, or South-Weſt, then it is very likely it will not keep long, but be muddy and ſtale: Therefore, to keep Beer in ſuch a Cellar, it ſhould be brewed in *October*, that the Drink may have Time to cure itſelf before the hot Weather comes on; but, in wettiſh or damp Cellars, it is beſt to brew in *March*, that the Drink may have Time to fine and ſettle before the Winter Weather is advanced. Now ſuch Cellar Extremities ſhould, if it could be done, be brought into a temperate State, for which Purpoſe ſome have been ſo curious as to have double or treble Doors to their Cellar to keep the Air out, and then carefully ſhut the outward, before they enter the inward one, whereby it will be more ſecure from aerial Alterations; for in Cellars and Places, that are moſt expoſed to ſuch Seaſons, Malt-Liquors are frequently diſturbed and made unfit for a nice Drinker; therefore, if a Cellar is kept dry, and theſe Doors to it, it is reckoned warm in Winter and cool in Summer; but the beſt of Cellars are thought to be choſe in Chalks, Gravels, or Sands, and particularly in Chalks, which are of a drying Quality more than any other, and conſequently diſſipate Damps the moſt of all Earths, which makes it contribute much to the good Keeping of the Drink, for all damp Cellars are prejudicial to the Preſervation of Beers and Ales, and ſooner bring on the Rotting of the Caſks and Hoops than the dry ones; inſomuch that, in a chalky Cellar near me, their Aſhen broad Hoops have laſted above thirty Years: Beſides, in ſuch incloſed Cellars and temperate Air, the Beers and Ales ripen more kindly, are better digeſted and ſoftened, and drink ſmoother: But, when the Air is in a Diſproportion by the Cellars letting in Heats and Colds, the Drink will grow ſtale and be diſturbed, ſooner than when the Air is kept out: From hence it is, that in ſome Places their Malt-Liquors are exceeding good, becauſe they brew with Pale or Amber Malts, chalky Water, and keep their Drinks in cloſe Vaults or proper dry Cellars, which is of ſuch Importance,

tance, that notwithſtanding any Malt-Liquor may be truly brewed, yet it may be ſpoiled in a bad Cellar, that may cauſe ſuch alternate Fermentations as to make it thick and ſour, tho' it ſometimes happens that after ſuch Changes it fines itſelf again; and, to prevent theſe Commotions of the Beer, ſome brew their pale Malt in *March*, and their brown in *October*, for that the pale Malt, having not ſo many fiery Particles in it as the brown, ſtands more in Need of the Summer's Weather to ripen it, while the brown Sort, being more hard and dry, is better able to defend itſelf againſt the Winter-Colds that will help to ſmooth its harſh Particles; yet, when they happen to be too violent, Horſe-dung ſhould be laid to the Windows as a Fortification againſt them; but, if there were no Lights at all to a Cellar, it would be better.

Some are of Opinion, that *October* is the beſt of all other Months to brew any Sort of Malt in, by Reaſon there are ſo many cold Months directly following, that will digeſt the Drink and make it much excel that brewed in *March*, becauſe ſuch Beer will not want that Care and Watching, as that brewed in *March* abſolutely requires, by often taking out and putting in the Vent-peg on Change of Weather; and, if it is always left out, then it deadens and palls the Drink; yet, if due Care is not taken in this Reſpect, a Thunder or ſtormy Night may marr all, by making the Drink ferment and burſt the Caſk; for which Reaſon, as Iron Hoops are moſt in Faſhion at this Time, they are certainly the greateſt Security to the Safety of the Drink thus expoſed; and next to them is the Cheſnut-hoop; both which will endure a ſhorter or longer Time, as the Cellar is more or leſs dry, and the Management attending them: The Iron Hoop generally begins to ruſt firſt at the Edges, and therefore ſhould be rubbed off when Opportunity offers, and be both kept from Wet as much as poſſible; for it is Ruſt that eats the Iron Hoops in two ſometimes in ten or twelve Years, when the Aſhen and Cheſnut in dry Cellars have laſted three Times as long.

CHAP. XVII.

Of Cleaning and Sweetening of Caſks.

IN Caſe your Caſk is a Butt, then with cold Water firſt rinſe out the Lees clean, and have ready boiling or very hot Water, which put in, and, with a long Stale and a little Birch faſtened to its End, ſcrub the Bottom as well as you can: At the ſame Time let there be provided another ſhorter Broom of about a Foot and a half long, that with one Hand may be ſo employed in the upper and other Parts as to clean the Caſk well: So in a Hogſhead, or other ſmaller Veſſel, the one-handed ſhort Broom may be uſed with Water, or with Water, Sand, or Aſhes, and be effectually cleaned; the Outſide of the Caſk about the Bung-hole ſhould be well waſhed, leſt the Yeaſt, as it works over, carries ſome of its Filth with it.

BUT, to ſweeten a Barrel, Kilderkin, Firkin, or Pin in the great Brewhouſes, they put them over the Copper-hole for a Night together, that the Steam of the boiling Water or Wort may penetrate into the Wood; this Way is ſuch a furious Searcher, that, unleſs the Caſk is new hooped juſt before, it will be apt to fall to Pieces.

Another Way.

TAKE a Pottle, or more, of Stone Lime, and put it into the Caſk; on this pour ſome Water, and ſtop it up directly, ſhaking it well about.

Another Way.

TAKE a long linen Rag and dip it in melted Brimſtone, light it at the End, and let it hang pendant with the upper Part of the Rag faſtened to the Wooden Bung; this is a moſt quick and ſure Way, and will not only ſweeten, but help to fine the Drink.

ANOTHER.

OR, to make your Caſk more pleaſant, you may uſe the Vintners Way, thus: Take four Ounces of Stone Brimſtone,

Brimſtone, one Ounce of burnt Allum, and two Ounces of Brandy; melt all theſe in an earthen Pan over hot Coals, and dip therein a Piece of new Canvaſs, and inſtantly ſprinkle thereon the Powders of Nutmegs, Cloves Coriander, and Aniſe-ſeeds: This Canvaſs ſet on Fire, and let it burn hanging in the Caſk faſtened at the End with the wooden Bung, ſo that no Smoke comes out.

For a muſty Caſk.

BOIL ſome Pepper in Water, and fill the Caſk with it ſcalding hot.

For a very ſtinking Veſſel.

THE laſt Remedy is the Cooper's taking out one of the Heads of the Caſk to ſcrape the Inſide or new ſhave the Staves, and is the ſureſt Way of all others, if it is fired afterwards within-ſide a ſmall Matter, as the Cooper knows how.

THESE ſeveral Methods may be made Uſe of at Diſcretion, and will be of great Service where they are wanted. The ſooner alſo a Remedy is applied, the better; elſe the Taint commonly increaſes, as many have to their Prejudice proved, who have made Uſe of ſuch Caſks, in Hopes the next Beer will overcome it; but when once a Caſk is infected, it will be a long While, if ever, before it becomes ſweet, if no Art is uſed. Many therefore of the careful Sort, in caſe they have not a Convenience to fill their Veſſel as ſoon as it is empty, will ſtop it cloſe to prevent the Air and preſerve the Lees ſound, which will greatly tend to the keeping of the Caſk pure and ſweet againſt the next Occaſion.

To prepare a new Veſſel to keep Malt-Liquors in.

A NEW Veſſel is moſt improperly uſed by ſome ignorant People for ſtrong Drink after only once or twice ſcalding with Water, which is ſo wrong, that ſuch Beer or Ale will not fail of taſting thereof for half, if not a whole Year afterwards; ſuch is the Tang of the Oak and its Bark, as may be obſerved from the ſtrong Scents

Scents of Tan-yards, which the Bark is one Cauſe of. To prevent then this Inconvenience, when your Brewing is over, put up ſome Water ſcalding hot, and let it run thro' the Grains; then boil it and fill up the Caſk, ſtop it well and let it ſtand till it is cold, do this twice; then take the Grounds of ſtrong Drink and boil in it green Walnut-leaves and new Hay or Wheat-ſtraw, and put all into the Caſk, that it be full, and ſtop it cloſe: After this, uſe it for ſmall Beer half a Year together, and then it will be thoroughly ſweet and fit for ſtrong Drinks; or,

Another Way.

TAKE a new Caſk and dig a Hole in the Ground, in which it may lie half Depth with the Bung downwards; let it remain a Week, and it will greatly help this or any ſtinking muſty Caſk. But, beſides theſe, I have writ of two other excellent Ways to ſweeten muſty or ſtinking Caſks, in my *Second Book of Brewing*.

Wine Caſks.

THESE, in my Opinion, are the cheapeſt of all others to furniſh a Perſon readily with, as being many of them good Caſks for Malt-Liquors, becauſe the Sack and White-wine Sorts are already ſeaſoned to Hand, and will greatly improve Beers and Ales that are put in them: But beware of the Rheniſh Wine Caſks for ſtrong Drinks; for its Wood is ſo tinctured with this ſharp Wine, that it will hardly ever be free of it, and therefore ſuch Caſk is beſt uſed for ſmall Beer. The Claret Caſk will a great deal ſooner be brought into a ſerviceable State for holding ſtrong Drink, if it is two or three Times ſcalded with Grounds of Barrels, and afterwards uſed for ſmall Beer for ſome Time. I have bought a Butt or Pipe for eight Shillings in *London* with ſome iron Hoops on it, a good Hogſhead for the ſame, and the half Hogſhead for five Shillings; the Carriage for a Butt by the Waggon thirty Miles is two Shillings and Six-pence, and the Hogſhead eighteen Pence: But to

cure

cure a Claret-caſk of its Colour and Taſte, put a Peck of Stone-lime into a Hogſhead, and pour upon it three Pails of Water; bung immediately with a wood or cork Bung, and ſhake it well about a Quarter of an Hour, and let it ſtand a Day and Night, and it will bring off the red Colour, and alter the Taſte of the Caſk very much. But, of three ſeveral other excellent Methods for curing muſty, ſtinking, new, and other tainted Caſks, I have writ, in my Account of Caſks in my *Second Book*.

CHAP. XVIII.

Of Bunging Caſks and Carrying of Malt-Liquors to ſome Diſtance.

I AM ſure this is of no ſmall Conſequence, however it may be eſteemed as a light Matter by ſome; for, if this is not duly performed, all our Charge, Labour, and Care will be loſt; and therefore here I ſhall diſſent from my *London* Faſhion, where I bunged up my Ale with Pots of Clay only, or with Clay mixed with Bay-ſalt, which is the better of the two, becauſe this Salt will keep the Clay moiſt longer than in its original State; and the Butt-beers and fine Ales were bunged with Cork drove in with a Piece of Hop-ſack or Rag, which, I think, are all inſipid, and the Occaſion of ſpoiling great Quantities of Drink, eſpecially the ſmall Beers; for, when the Clay is dry, which is ſoon in Summer, there cannot be a regular Vent thro' it, and then the Drink from that Time flattens and ſtales to the great Loſs in a Year to ſome Owners, and the Benefit of the Brewer; for then a freſh Caſk muſt be tapped to ſupply it, and the remaining Part of the other throw'd away. Now, to prevent this great Inconvenience, my Bung-holes are not quite of the largeſt Size of all, and yet big enough for the common wooden iron hooped Funnel uſed in ſome Brew-houſes: In this I put in a turned Piece of Aſh or Sallow three Inches broad at Top,

Top, and two Inches and a half long, firſt putting in a double Piece of dry brown Paper, that is ſo broad that an Inch or more may be out of it, after the wooden Bung is drove down with a Hammer pretty tight; this Paper muſt be furled or twiſted round the Bung, and another looſe Piece upon and around that, with a little Yeaſt, and a ſmall Peg put into the Bung, which is to be raiſed at Diſcretion when the Beer is drawing, or at other Times to give it Vent, if there ſhould be Occaſion: Others will put ſome Coal or Wood-aſhes wetted round this Bung, which will bind very hard, and prevent any Air getting into or out of the Caſk; but this in time is apt to rot and wear the Bung-hole by the Salt or Sulphur in the Aſhes, and employing a Knife to ſcrape it afterwards. Yet, for keeping Beers, it is the beſt Security of all other Ways whatſoever.

THERE is alſo a late Invention practiſed by a common Brewer in the Country that I am acquainted with, for the ſafe Carriage of Drink on Drays to ſome Diſtance, without loſing any of it; and that is, in the Top-center of one of thoſe Bungs, he puts in a wooden Funnel, whoſe Spout is about four Inches long, and leſs than half an Inch Diameter at Bottom; this is turned at Top into a concave Faſhion like a hollow round Bowl, that will hold about a Pint, which is a conſtant Vent to the Caſk, and yet hinders the Liquor from aſcending no faſter than the Bowl can receive, and return it again into the Barrel: I may ſay farther, he has brought a Barrel two Miles, and it was then full, when it arriv'd at his Cuſtomer's, becauſe the Pint that was put into the Funnel, at Setting out, was not at all loſt when he took it off the Dray; this may be alſo made of Tin, and will ſerve from the Butt to the ſmall Caſk.

IN the Butt there is a Cork-hole made about two Inches below the upper Head, and cloſe under that a Piece of Leather is nailed Spout-faſhion, that jetts three Inches out, from which the Yeaſt works and falls into a Tub; and, when the Working is over, the Cork is put cloſely in, for the Bung in the Head of the upright Caſk

is put in as ſoon as it is filled up with new Drink: Now when ſuch a Caſk is to be broached, and a quick Draught is to follow, then it may be tapped at Bottom; but, if otherwiſe, the braſs Cock ought to be firſt put in at the Middle, and before the Drink ſinks to that it ſhould be tapped at Bottom, to prevent the breaking of the Head of Yeaſt, and its growing ſtale, flat, and ſour.

In ſome Places in the Country, when they brew Ale or Beer to ſend to *London* at a great Diſtance, they let it be a Year old before they tap it, ſo that then it is perfectly fine; this they put into ſmall Caſks that have a Bung-hole only fit for a large Cork, and then they immediately put in a Roll of Bean-flour firſt kneaded with Water or Drink, and baked in an Oven, which is all ſecured by pitching in the Cork, and ſo ſent in the Waggon; the Bean-flour feeding and preſerving the Body of the Drink all the Way, without fretting or cauſing it to burſt the Caſk for Want of Vent, and when tapped will alſo make the Drink very briſk, becauſe the Flour is in ſuch a hard Conſiſtence, that it won't diſſolve in that Time; but, if a little does mix with the Ale or Beer, its heavy Parts will ſooner fine than thicken the Drink, and keep it mellow and lively to the laſt, if Air is kept out of the Barrel.

CHAP. XIX.

Of the Strength and Age of Malt-Liquors.

WHETHER they be Ales or ſtrong Beers, it is certain that the middling Sort is allowed by Phyſicians to be the moſt agreeable of any, eſpecially to thoſe of a ſedentary Life, or thoſe that are not occupied in ſuch Buſineſs as promotes Perſpiration enough to throw out and break the Viſcidities of the ſtronger Sorts; on which Account the laborious Man has the Advantage, whoſe Diet being poor, and Body robuſt, the Strength of ſuch Liquors gives a Supply, and bet-

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ter digeſts into Nouriſhment: But, for the unactive Man, a Hogſhead of Ale which is made from ſix Buſhels of Malt is ſufficient for a Diluter of their Food, and will better aſſiſt their Conſtitution than the more ſtrong Sort, that would in ſuch produce Obſtructions and ill Humours; and therefore that Quantity for Ale, and ten Buſhels for a Hogſhead of ſtrong Beer that ſhould not be tapped under nine Months, is the moſt healthful. And this I have experienced by enjoying ſuch an Amber-Liquor that has been truly brewed from good Malt, as to be of a vinous Nature, that would permit a hearty Doſe over Night, and yet the next Morning leave a Perſon light, briſk, and unconcerned. This then is the true *Noſtrum* of Brewing, and ought to be ſtudied and endeavoured for by all thoſe that can afford to follow the foregoing Rules, and then it will ſupply, in a great Meaſure, thoſe chargeable (and often adulterated, tartarous, arthritic) Wines. So likewiſe for ſmall Beer, eſpecially in a Farmer's Family, where it is not of a Body enough, the Drinkers will be feeble in hot Weather, and not be able to perform their Work, and will alſo bring on Diſtempers, beſides the Loſs of Time, and a great Waſte of ſuch Beer that is generally much thrown away; becauſe Drink is certainly a Nouriſher of the Body, as well as Meats, and, the more ſubſtantial they both are, the better will the Labourer go thro' his Work, eſpecially at Harveſt; and in large Families the Doctor's Bills have proved the Evil of this bad Œconomy, and far ſurmounted the Charge of that Malt that would have kept the Servants in good Health, and preſerved the Beer from ſuch Waſte as the ſmaller Sort is liable to.

It is therefore that ſome prudent Farmers will brew their Ale and ſmall Beer in *March*, by allowing five or ſix Buſhels of Malt, and two Pounds of Hops, to the Hogſhead of Ale; and a Quarter of Malt, and three Pounds of Hops, to five Barrels of ſmall Beer. Others there are, that will brew their Ale or ſtrong Beer in *October*, and their ſmall Beer a Month before it is wanted.

Others will brew their Ale and ſmall Beer in *April*, *May*, and *June*; but this according to Humour, and therefore I have hinted of the ſeveral Seaſons for brewing theſe Liquors: However, in my Opinion, whether it be ſtrong or ſmall Drinks, they ſhould be clear, ſmooth, and not too ſmall, if they are deſigned for Profit and Health; for, if they are otherwiſe, it will be a ſad Evil to Harveſt-Men, becauſe then they ſtand moſt in Need of the greateſt Balſamics: To this End, ſome of the ſoftening Ingredients, mentioned in the foregoing Receipts, ſhould be made Uſe of to feed it accordingly, if theſe Drinks are brewed forward. And that this particular important Article in the brewing Œconomy may be better underſtood, I ſhall here recite Dr. *Quincy*'s Opinion of Malt-liquors, *viz.* The Age of Malt-drinks makes them more or leſs wholeſome, and ſeems to do ſomewhat the ſame as Hops; for thoſe Liquors, which are longeſt kept, are certainly the leaſt viſcid; Age, by Degrees, breaking the viſcid Parts, and rendering them ſmaller, makes them finer for Secretion; but this is always to be determined by their Strength, becauſe in Proportion to that they will ſooner or later come to their full Perfection, and likewiſe their Decay, until the finer Spirits quite make their Eſcape, and the Remainder becomes vapid and ſour. By what therefore has been already ſaid, it will appear, that, the older Drinks are, the more healthful, ſo they be kept up to this Standard, but not beyond it. Some therefore are of Opinion, that ſtrong Beer, brewed in *October*, ſhould be tapped at *Midſummer*, and that brewed in *March* at *Chriſtmas*; as being moſt agreeable to the Seaſons of the Year that follow ſuch Brewings: For then they will both have Part of a Summer and Winter to ripen and digeſt their ſeveral Bodies; and it is my humble Opinion, that where the Strength of the Beer, the Quantity of Hops, the Boiling, Fermentation, and the Caſk are all rightly managed, there Drink may be moſt excellent, and better at nine Months Age, than at nine Years, for Health and Pleaſure of Body. But, to be truly

truly certain of the right Time, there ſhould be firſt an Examination made by pegging the Veſſel, to prove, if ſuch Drink is fine, the Hop ſufficiently rotted, and it be mellow and well-taſted.

CHAP. XX.

Of the Pleaſure and Profit of Private Brewing, and the Charge of Buying Malt-Liquors.

HERE I am to treat of the main Article of ſhewing the Difference between brewing our own Ales and Beers, and buying them, which I doubt not will appear ſo plain and evident, as to convince any Reader, that many Perſons may ſave well towards half in half, and have their Beer and Ale ſtrong, fine, and aged, at their own Diſcretion: A Satisfaction that is of no ſmall Weight, and the rather, ſince I have now made known a Method of brewing a Quantity of Malt with a little Copper and a few Tubs, a Secret that has long wanted Publication; for now a Perſon may brew in a little Room, and that very ſafely, by keeping his Wort from Foxing, as I have already explained, which by many has been thought impoſſible heretofore; and this Direction is the more valuable, as there are many Thouſands who live in Cities and Towns, that have no more than a few Yards ſquare of Room to perform a private Brewing in. And as for the Trouble, it is eaſy to account for by thoſe who have Time enough on their Hands, and would do nothing elſe if they had not done this: Or, if a Man is paid half a Crown a Day for a Quantity accordingly; or, if a Servant can do this beſides his other Work, for the ſame Wages and Charge, I believe the following Account will make it appear it is over-balanced conſiderably, by what ſuch a Perſon may ſave in this Undertaking, beſides the Pleaſure of thoroughly knowing the ſeveral Ingredients and Cleanlineſs of the Brewer and Utenſils. In ſeveral of the Northern Counties in *England*, where they have good

Barley, Coak-dried Malt, and the Drink brewed at Home, there are ſeldom any bad Ales or Beers, becauſe they have the Knowledge in Brewing ſo well, that there are hardly any common Brewers amongſt them: In the Weſt, indeed, there are ſome few, but in the South and Eaſt Parts there are many; and now follows the Account, that I have ſtated according to my own general Practice, *viz.*

A Calculation of the Charge and Profit of brewing Six Buſhels of Malt for a Private Family.

	l.	*s.*	*d.*
Six Buſhels of Malt, at 2 *s.* 8 *d. per* Buſhel,	0	16	0
Hops one Pound — — — — —	0	1	6
Yeaſt a Quart — — — — —	0	0	4
Coals one Buſhel, or if Wood or Furze	0	1	0
A Man's Wages a Day — — —	0	2	6
Total	1	1	4

Of theſe ſix Buſhels of Malt I make one Hogſhead of Ale and another of ſmall Beer: But, if I was to buy them of ſome common Brewers, the Charge will be as follows, *viz.*

	l.	*s.*	*d.*
One Hogſhead of Ale, containing 48 Gallons, at 6 *d. per* Gallon, is —	1	4	0
One Hogſhead of ſmall Beer, containing 54 Gallons, at 2 *d. per* Gallon, is —	0	9	0
	1	13	0
Total ſaved	0	11	8

By the above Account it plainly appears, that 11 *s.* and 8 *d.* is clearly gained in Brewing of ſix Buſhels of Malt at our own Houſe for a private Family, and yet I make the Charge fuller by 2 *s.* and 6 *d.* than it will happen with many, whoſe Conveniency by Servants, *&c.* may intirely take it off; beſides the ſix Buſhels of Grains that are currently ſold for 3 *d.* the Buſhel, which will make the 11 *s.* and 8 *d.* more by 4 *s.* without reckoning

ing any Thing for Yeaſt, that in the very cheapeſt Time here ſells for 4*d.* the Quart, and many Times there happens three Quarts from ſo much Drink; ſo that there may poſſibly be gained in all 16*s.* and 8*d.* a fine Sum, indeed, in ſo ſmall a Quantity of Malt. But here, by Courſe, will ariſe the Queſtion, whether this Ale is as good as that bought of ſome of the common Brewers at 6*d.* a Gallon: I cannot ſay all is; however, I can aver this, that the Ale I brew in the Country from ſix Buſhels of Malt for my Family, I think, is generally full as good, if not better than any I ever ſold at that Price in my *London* Brewhouſe: And, if I ſhould ſay, that where the Malt, Water, and Hops are right good, and the Brewer's Skill anſwerable to them, there might be a Hogſhead of as good Ale, and another of ſmall Beer, made from five Buſhels, as I deſire to uſe for my Family, or for Harveſt-Men; it is no more than I have many Times experienced, and it is the common Length I made for that Purpoſe. And whoever makes Uſe of true Pale and Amber-malts, and purſues the Directions of this Book, I doubt not but will have their Expectation fully anſwered in this laſt Quantity, and ſo ſave the great Expence of Exciſe that the common Brewers Drink is always clogged with, which is no leſs than 5*s.* for Ale, and 18*d.* per Barrel for ſmall Beer.

CHAP. XXI.

A Philoſophical Account for Brewing ſtrong October *Beer. By an ingenious Hand.*

IN Brewing, your Malt ought to be ſound and good, and, after its Making, to lie two or three Months in the Heap, to come to ſuch a Temper, that the Kernel may readily melt in the Waſhing,

THE well Dreſſing your Malt ought to be one chief Care; for, unleſs it be freed from the Tails and Duſt, your Drink will not be fine and mellow as when it is clean dreſſed.

The Grinding alſo muſt be conſidered, according to the high or low Drying of the Malt; for, if high dried, then a groſs Grinding is beſt, otherwiſe a ſmaller may be done; for the Care in Grinding conſiſts herein, leſt too much of the Huſks being ground ſmall ſhould mix with the Liquor, which makes groſs *Fæces*, and conſequently your Drink will have too fierce a Fermentation, and by that Means make it Acid, or what we call Stale.

When your Malt is ground, let it ſtand in Sacks twenty-four Hours at leaſt, to the End that the Heat in Grinding may be allay'd, and it is conceived by its ſo ſtanding that the Kernel will diſſolve the better.

The Meaſure and Quantity we allow of Hops and Malt, is five Quarters of Malt to three Hogſheads of Beer, and eighteen Pounds of Hops at leaſt to that Quantity of Malt; and, if Malt be pale dried, then add three or four Pounds of Hops more.

The Choice of Liquor for Brewing is of conſiderable Advantage in making good Drink, the ſofteſt and cleaneſt Water is to be preferred, your harſh Water is not to be made Uſe of.

You are to boil your firſt Liquor, adding a Handful or two of Hops to it; then, before you ſtrike it over to your Goods or Malt, cool in as much Liquor as will bring it to a Temper not to ſcald the Malt, for it is a Fault not to take the Liquor as high as poſſible, but not to ſcald.

The next Liquors do the ſame.

And, indeed, all your Liquors ought to be taken as high as may be, that is, not to ſcald.

When you let your Wort from your Malt into the Under-back, put to it a Handful or two of Hops, it will preſerve it from that Accident which Brewers call *Blinking* or *Foxing*.

In boiling your Worts, the firſt Wort boil high or quick; for, the quicker the firſt Wort is boiled, the better it is.

The Second boil more than the firſt, and the Third or Laſt more than the Second.

In Cooling lay your Worts thin, and let each be well cooled, and Care muſt be taken in letting them down into the Tun, that you do it leiſurely, to the End that as little of the *Fæces* or Sediment which cauſes the Fermentation to be fierce or mild; for,

Note, There are, in all fermented Liquors, Salt and Sulphur, and to keep theſe two Bodies in a due Proportion, that the Salt does not exalt itſelf above the Sulphur, conſiſts a great Part of the Art in Brewing.

When your Wort is firſt let into your Tun, put but a little Yeaſt to it, and let it work by Degrees, quietly; and, if you find it works but moderately, whip in the Yeaſt two or three Times or more, till you find your Drink well fermented; for, without a full Opening of the Body by Fermentation, it will not be perfectly fine, nor will it drink clean and light.

When you cleanſe, do it by a Cock from your Tun, placed ſix Inches from the Bottom, to the End that moſt of the Sediment may be left behind, which may be thrown on your Malt to mend your ſmall Beer.

When your Drink is tunned, fill your Veſſel full, let it work at the Bung-hole, and have a Reſerve in a ſmall Caſk to fill it up, and do not put any of the Drink which will be under the Yeaſt after it is worked over into your Veſſels, but put it by itſelf in another Caſk, for it will not be ſo good as your other in the Caſk.

This done, you muſt wait for the finiſhing of the Fermentation, then ſtop it cloſe, and let it ſtand till the Spring; for Brewing ought to be done in the Month of *October*, that it may have Time to ſettle and digeſt all the Winter Seaſon.

In the Spring you muſt unſtop your Vent-hole, and thereby ſee whether your Drink doth ferment or not; for, as ſoon as the warm Weather comes, your Drink will have another Fermentation, which, when it is over, let it be again well ſtopped and ſtand till *September* or longer, and then peg it; and, if you find it pretty fine, and the Hop well rotted, and of a good pleaſant Taſte for Drinking,

THEN, and not before, draw out a Gallon of it, put to it two Ounces of Iſing-glaſs cut ſmall and well beaten to melt, ſtirring it often, and whip it with a Whiſk till the Iſing-glaſs be melted; then ſtrain it and put it into your Veſſel, ſtirring it well together, ſtop the Bung ſlightly, for this will cauſe a new and ſmall Fermentation; when that is over ſtop it cloſe, leaving only the Vent-hole a little ſtopped, let it ſtand, and in ten Days, or a little more, it will be tranſparently fine, and you may drink of it out of the Veſſel till two Parts in three be drawn; then bottle the reſt, which will in a little Time come to drink very well.

IF your Drink in *September* be well conditioned for Taſte, but not fine, and you deſire to drink it preſently, rack it before you put your Iſing-glaſs to it, and then it will fine the better and drink the cleaner.

To make Drink fine quickly, I have been told that by ſeparating the Liquor from the *Fæces*, when the Wort is let out of the Tun into the Under-back, it may be done in this Manner; when you let your Wort into your Under-back out of your Tun, catch the Wort in ſome Tub ſo long, and ſo often as you find it run foul; put that ſo catched on the Malt again, and do ſo till the Wort run clear into the Under-back. This is to me a very good Way (where it may be done) for it is the *Fæces* which cauſe the fierce and violent Fermentation, and to hinder that in ſome Meaſure is the Way to have fine Drink: Note, That the finer you make your Wort, the ſooner your Drink will be fine, for I have heard that ſome, curious in Brewing, have cauſed Flannels to be ſo placed, that all the Wort may run thro' one or more of them into the Tun before Working, by which Means the Drink was made very fine and well-taſted.

Obſervations on the foregoing Account.

THIS Excellent Philoſophical Account of brewing *October* Beer has hitherto remained in private Hands as a very great Secret, and was given to a Friend of mine by the Author himſelf, to whom the World is much

much obliged, altho' it come by me: In Juſtice therefore to this ingenious Perſon, I would here mention this Name, had I Leave for ſo doing; but at preſent this Intimation muſt ſuffice. However, I ſhall here take Notice, that this Caution againſt uſing tailed or duſty Malt, which is too commonly ſold, is truly worthy of Obſervation; for theſe are ſo far from producing more Ale or Beer, that they abſorb and drink Part of it up.

In grinding Malts he notifies well to prevent a foul Drink.

The Quantity he allows is ſomething above thirteen Buſhels to the Hogſhead, which is very ſufficient; but this as every Body pleaſes.

The Choice of Liquors or Waters for Brewing, he ſays, is of conſiderable Advantage; and ſo muſt every Body elſe that knows their Natures, and loves Health and pleaſant Drink: For this Purpoſe, in my Opinion, the Air and Soil are to be regarded where the Brewing is performed; ſince the Air affects all Things it can come at, whether Animal, Vegetable, or Mineral, as may be proved from many Inſtances: In the Marſhes of *Kent* and *Eſſex*, the Air there is generally ſo infectious, by Means of thoſe low, veaſy, boggy Grounds, that ſeldom a Perſon eſcapes an Ague one Time or other, whether Natives or Aliens, and is often fatally known to ſome of the *Londoners*, and others who merrily and nimbly travel down to the Iſles of *Grain* and *Sheppy* for a valuable Harveſt, but in a Month's Time they generally return thro' the Village of *Shorne* with another Mein. There is alſo a little Moor in *Hertfordſhire*, thro' which a Water runs that frequently gives the *Paſſant* Horſes that drink of it the Colic or Gripes, by Means of the aluminous ſharp Particles of its Earth; its Air is alſo ſo bad, as has obliged ſeveral to remove from its Situation for their Healths: The Dominion of the Air is likewiſe ſo powerful over Vegetables, that what will grow in one Place will not in another, as is plain from the Beech and black Cherry Tree, that refuſe the Vale of *Ayleſbury*, tho' on ſome Hills there, yet will thrive in the

Chiltern

Chiltern or hilly Country: So the Limes and other Trees about *London* are all generally black-barked, while thoſe in the Country are moſt of them of a Silver White. Water is alſo ſo far under the Influence of the Air and Soil, as makes many excellent for Brewing when others are as bad. In Rivers, that run thro' boggy Places, the Sullage or Waſhings of ſuch Soils are generally unwholeſome as the Nature of ſuch Ground is; and ſo the Water becomes infected by that and the Effluvia or Vapours that accompany ſuch Water: So Ponds are ſurely good or bad, as they are under too much Cover, or ſupplied by nafty Drains, or as they ſtand ſituated or expoſed to good and bad Airs. Thus the Well-waters by Conſequence ſhare in the good or bad Effects of ſuch Soils that they run through, and the very Surface of the Earth, by which ſuch Waters are ſtrained, is ſurely endowed with the Quality of the Air in which it lies; which brings me to my intended Purpoſe, to prove that Water drawn out of a Chalky or Fire-ſtone Well, which is ſituated under a dry, ſweet, loamy Soil, in a fine pure Air, and that is perfectly ſoft, muſt excel moſt if not all other Well-waters for the Purpoſe in Brewing. The Worts alſo, that are rooted in ſuch an Air, in Courſe partake of its nitrous Benefits, as being much expoſed thereto in the high Backs or Coolers that contain them. In my own Grounds I have Chalks under Clays and Loams; but, as the latter is better than the former, ſo the Water proves more ſoft and wholeſome under one than the other: Hence then may be obſerved the contrary Quality of thoſe harſh curding Well-waters that many drink of in their Malt-Liquors, without conſidering their ill Effects, which are juſtly condemned by this able Author, as unfit to be made Uſe of in Brewing *October* Beer.

The Boiling a few Hops in the firſt Water is good, but they muſt be ſtrained through a Sieve before the Water is put into the Malt; and to check its Heat with cold Liquor, or to let it ſtand to cool ſome

Time, is a right Method, leſt it ſcalds and locks up the Pores of the Malt, which would then yield a thick Wort, to the End of the Brewing, and never be good Drink.

His putting Hops into the Under-back, is an excellent Contrivance to prevent Foxing, as I have already hinted.

The quick Boiling of the Wort is of no leſs Service, and that the ſmaller Wort ſhould be boiled longer, than the ſtrong, is good Judgment, becauſe, the ſtronger the Wort, the ſooner the Spirits fly away, and the Waſte is of more Conſequence; beſides, if the firſt Wort was to be boiled too long, it would obtain ſo thick a Body, as to prevent, in a great Meaſure, its Fining hereafter ſo ſoon in the Barrel, while the ſmaller Sort will evaporate its more watry Parts, and thereby be brought into a thicker Conſiſtence, which is perfectly neceſſary in thin Worts; and in this Article lies ſo much the Skill of a Brewer, that ſome will make a longer Length than ordinary from the Goods for ſmall Beer, to ſhorten it afterwards in the Copper by Length of Boiling; and this Way of conſuming it is the more natural, becauſe the remaining Part will be better cured.

The Laying Worts thin is a moſt neceſſary Precaution; for this is one Way to prevent their Running into Coheſions and Foxing, the Want of which Knowledge and Care has undoubtedly been the Occaſion of great Loſſes in Brewing; for, when Worts are tainted in any conſiderable Degree, they will be ropy in Time and unfit for the human Body, as being unwholeſome as well as unpleaſant. So likewiſe is his *Item* of great Importance, when he adviſes to draw the Worts off fine out of the Backs or Coolers, and leave the *Fæces* or Sediments behind, by Reaſon, as he ſays, they are the Cauſe of thoſe two deteſted Qualities in Malt-Liquors, Staleneſs and Foulneſs, two Properties that ought to employ the greateſt Care in Brewers to prevent; for it is certain theſe

Sediments

Sediments are a Compoſition of the very worſt Part of the Malt, Hops, and Yeaſt, and, while they are in the Barrel, will ſo tincture and impregnate the Drink with their inſanous and unpleaſant Nature, that its Drinkers will be ſure to participate thereof more or leſs as they have lain together a longer or a ſhorter Time. To have then a Malt-Liquor balſamic and mild, the Worts cannot be run off too fine from the Coolers, nor well fermented too ſlow, that there may be a Medium kept, in both the Salt and Sulphur, that all fermented Malt-Drinks abound with; and herein, as he ſays, lies a great Parr of the Art of Brewing.

He ſays truly well, that a little Yeaſt at firſt ſhould be put to the Wort, that it may quietly work by Degrees, and not be violently forced into a high Fermentation; for then by Courſe the Salt and Sulphur will be too violently agitated into ſuch an Exceſs and Diſagreement of Parts, that will break their Unity into irregular Commotions, and cauſe the Drink to be ſoon ſtale and harſh. But, if it ſhould be too backward and work too moderately, then Whipping the Yeaſt two or three Times into it will be of ſome Service to open the Body of the Beer; for, as he obſerves, if Drink has not a due Fermentation, it will not be fine, clean, nor light.

His Advice to draw the Drink out of the Tun by a Cock at ſuch a Diſtance from the Bottom is right; becauſe that Room will beſt keep the *Fæces* from being diſturbed as the Drink is drawing off, and leaving them behind; but, for putting them afterwards over the Malt for ſmall Beer, I do not hold it conſonant with good Brewing, by Reaſon in this Sediment there are many Particles of the Yeaſt, that conſequently will cauſe a ſmall Fermentation in the Liquor and Malt, and be a Means to ſpoil rather than make good ſmall Beer.

What he ſays of filling up the Caſk with a Reſerve of the ſame Drink, and not with that which has once worked out, is paſt Diſpute juſt and right.

And

And ſo is what he ſays of ſtopping up the Veſſel cloſe after the Fermentation is over; but that it is beſt to brew all ſtrong Beer in *October*, I muſt here take Leave to diſſent from the Tenet, becauſe there is Room for ſeveral Objections in Relation to the Sort of Malt and Cellar, which as I have before explained, I ſhall ſay the leſs here.

As he obſerves, Care ſhould be taken in the Spring, to unſtop the Vent, leſt the warm Weather cauſe ſuch a Fermentation as may burſt the Caſk, and alſo in *September*, that it be firſt tried by Pegging if the Drink is fine, well-taſted, and the Hop rotted; and then, if his Way is liked beſt, bring the reſt into a tranſparent Fineneſs; for Clearneſs in Malt-Liquors, as I ſaid before, and here repeat it again, is a moſt agreeable Quality that every Man ought to enjoy for his Health and Pleaſure, and therefore he adviſes for Diſpatch in this Affair, and to have the Drink very fine, to rack it off before the Iſing-glaſs is put in; but I cannot be a Votary to this Practice, as believing the Drink muſt loſe a great Deal of its Spirits by ſuch Shiftings; yet I muſt chime in with his Notion of putting the Wort ſo often over the Malt, till it comes off fine as I have already taught, which is a Method that has been uſed many Years in the North of *England*, where they are ſo curious as to let the Wort lie ſome Time in the Underback to draw it off from the *Fæces* there; nor are they leſs careful to run it fine out of the Cooler into the Tun, and from that into the Caſk; in all which three ſeveral Places the Wort and Drink may be had clear and fine, and then there will be no more Sediments than are juſt neceſſary to aſſiſt and feed the Beer, and preſerve its Spirits in a due Temper. But if Perſons have Time and Conveniency, and their Inclination leads them to obtain their Drink in the utmoſt Fineneſs, it is an extraordinary good Way to uſe *Hippocrates*'s Sleeve or Flannel-bag, which I did in my great Brew-houſe at *London*, for ſtraining off the *Fæces* that were left in the Backs. As to the Quantity of Malt for

Brewing a Hogſhead of *October* Beer; I am of Opinion thirteen Buſhels are right, and ſo are ten, fifteen, and twenty, according as People approve of; for, near *Litchfield*, I know ſome have brewed a Hogſhead of *October* Beer from ſixteen Buſhels of Barley-Malt, one of Wheat, one of Beans, one of Peaſe, and one of Oat-Meal, beſides hanging a Bag of Flour, taken out of the laſt four Malts, in the Hogſhead for the Drink to feed on; nor can a certain time be limited and adjuſted for the Tapping of any Drink (notwithſtanding what has been affirmed to the Contrary) becauſe ſome Hops will not be rotted ſo ſoon as others, and ſome Drinks will not fine ſo ſoon as others; as is evident in pale Malt-drinks, that will ſeldom or never break ſo ſoon in the Copper as the brown Sort, nor will they be ſo ſoon ripe and fit to tap as the high dried Malt-Drink will. Therefore what this Gentleman ſays of trying Drink by firſt pegging it before it is tapped, in my Opinion, is more juſt and right than relying on a limited Time for broaching ſuch Beer.

The End of the Firſt Part.

THE

London *and* Country

BREWER.

Containing an ACCOUNT of

I. Several ERRORS committed in making MALTS.
II. Of Brewing WHEAT-MALT.
III. Of the Good and Bad PROPERTIES of the HOP.
IV. Of the Nature, Prevention, and Cure of Foxed MALT-LIQUORS, and UTENSILS.
V. Several WAYS of Recovering ſtale or pricked MALT-LIQUORS.
VI. Of FERMENTATION.
VII. Of Brewing DORCHESTER BEER, SHROPSHIRE DRINK, and a WEST-INDIA LIQUOR.
VIII. Of Brewing MALT-DRINKS without Boiling Water, Wort, or Hops.
IX. Sir *Thomas Seabright*'s Method of Brewing a Pipe of PALE OCTOBER.
X. The Fraudulent Practice by ſhort-meaſured CASKS expoſed.
XI. A LETTER from one BREWER to another, concerning CONCEALMENTS of MALT-DRINKS.

To which is added,

A DISSERTATION on the BREWERY:

Wherein is ſhewn,

The ill Conſequences of CLAY-WELLS, and CLAY-BUNGS; how to brew a clear, ſound DRINK, with naſty, foul WATER; the prejudicial Nature of FÆCES; with ſeveral other ſerviceable Matters.

By a Perſon formerly concerned in a publick Brewhouſe in London, *but for Twenty Years paſt has reſided in the Country.*

PART II.

LONDON:
Printed for T. ASTLEY;
And Sold by R. BALDWIN, jun. at the *Roſe* in *Pater-Noſter-Row.* MDCCI.

THE

London and Country

BREWER.

THE PREFACE.

AS it is certain that *Malt-Liquors, above any other Sorts, paſs through the moſt Digeſtions, and are therefore more liable to Miſmanagements, which daily Experience confirms; and as the Uſe of them is general, and thereon ſo much depends the Health of the Body, I think it calls for our greateſt Study and Application, to detect the common Errors, and to lay down ſuch plain, eaſy, and efficacious Rules and Directions, as may tend to bring about ſuch an Amendment in the Practice of Brewing, and Management of Malt-Liquors, that we may enjoy wholeſomer and pleaſanter Drink of this Kind, than heretofore, by eſtabliſhing it upon the Baſis of a more juſt and national Rationale.*

THEREFORE, this being premiſed, I have, in my former Work, endeavoured to lend my helping Hand, to effect this ſo much deſired and wiſhed for End, as the Quantity of my Sheets would permit: But this being a Science more extenſive, and capable of Improvement, than the Generality of Mankind are apprehenſive of (who too much content themſelves in following the Errors of their Predeceſſors) I have here, in this Second Part, enlarged on ſome of my former Heads, as I judged moſt neceſſary; and likewiſe added and diſcuſſed ſuch new Matter, as might conduce moſt to the Improvement of this Art, and the Un-

deceiving of ſuch, who, through Ignorance or Intereſt, ſuffer themſelves to perſiſt in their Errors.

WHEN a Perſon is about to brew Malt-Drink, it would not be amiſs to put the following, or ſome ſuch-like natural Quære to himſelf, What am I going to do, or, What is my Intention in this Procedure? 'Tis certainly to procure a fine, pure, and light Vinous Liquor, as free from any terrene, clammy, or other heterogeneous Particles as may be.

BUT how the preſent uſual Management by long Maſhings, long Boiling of the Hop, either under or over Coction of the Wort, violent repeated Beatings in of the Yeaſt, Mixing injurious Ingredients in the Drink; the prejudicial (though common) Uſe of Clay, &c. I ſay, how theſe do anſwer the Purpoſe aforeſaid, in affording a pure, light, wholeſome, and Vinous Drink, I ſhall leave to the Determination of all ſuch as will but make Uſe of their Reaſon.

AND were People to conſider the true Nature of Yeaſt or Barn (that, notwithſtanding it is ſo neceſſary and uſeful an Ingredient, if rightly and judiciouſly managed, yet it is certain) that it contains very inimical and pernicious Properties, they would never practiſe thoſe violent, long, and repeated unnatural Beatings in of it into the Drink, which cannot but be attended with many ill and miſchievous Effects, notwithſtanding the common ſpecious Pretences in its Behalf. Which I have in my former, as well as in the following Sheets (I hope) fully confuted, and made appear.

BUT farther, to illuſtrate and evince the Truth of my Aſſertions, I cannot here omit the Caſe of a Perſon, whoſe Father, being a Tobacconiſt in London, *ſent his Son among his Cuſtomers, at, and about* Stamford *in* Lincolnſhire, *where he fell into Drinking ſuch Quantities of their yeaſty Ale, as made him diſtracted, and ſo he remain-*

ed,

ed, till his obſtinate Diſtemper yielded to the well adapted Medicines of an ingenious Phyſician, who, after ſome Months Keeping him in his Houſe, about thirty Miles from London, *at laſt brought him to his Senſes again.*

ANOTHER Inſtance of the ill Properties of Yeaſt were demonſtrated in the following Experiment (which I had from an ingenious and learned Gentleman, who was an Eye-witneſs of its Veracity) viz. *That ſome Slices of Bread were put into about two Quarts of Yeaſt, which an hungry Dog licked up for the Sake of the Bread; the Conſequence was this, the Dog died in a very little Time after, being very much ſwelled, as it had been with a Dropſy:*

THEREFORE, I muſt neceſſarily join with thoſe judicious Gentlemen, who are of Opinion, that the Drinking of yeaſty Malt-Liquors, whether new or ſtale, is the chief Cauſe of thoſe two frequent fatal Diſeaſes, the Dropſy, Stone, &c. *among us; for, if Malt-Drink be hard or ſtale, in many Conſtitutions, it is manifeſtly apt to generate ſabulous Concretions, not only in the urinary Paſſages, but in other Parts of the Body; and it is evident, that it receives this Staleneſs or Acidity chiefly from the Yeaſt, which the Drink is impregnated with, as it ſerves for a Lee for the Liquor to feed on; juſt as if we were to put any Quantity of an unwholeſome bruiſed Herb or Root into a Caſk of Drink, we might reaſonable expect the Liquor to be tinctured by it, and to be endued with its ill Qualities: So that it plainly appears how very neceſſary it is (if we would enjoy wholeſome and palatable Malt-Drink) to free it as much as poſſible from that deſtructive Acid.*

I have likewiſe, in this ſecond Treatiſe, farther enlarged on the great Uſe of artificial Compoſitions, or Lees, and particularly recommended thoſe moſt excellent wholeſome Balls *(mentioned in Page 56 of my former Part) which have deſervedly gained ſuch a Repute, and which are ſo highly neceſſary and uſeful for all Keeping Malt-Drinks eſpecially, whether Pale, Amber, or Brown, to have*

always in them, as nothing can contribute more to their Fining, Feeding, and Preſervation, in a mild and ſound State, and are perfect Antidotes to the ill Qualities of the Yeaſt, Fæces, &c. Likewiſe of ſuch a curing and improving Nature, that, by their ſole Uſe, I have even recovered damaged or prick'd Drink and Cyder, and will anſwer in Wines.

ANOTHER too common Misfortune of our having unwholeſome and ill-taſted Beers and Ales (eſpecially in warm Weather) is, by what is commonly called Foxing, *or more properly from a Putrefaction they are liable to, in paſſing through their ſeveral Managements, the Cauſe, Prevention, and effectual Cure of which grand Evil, I have here freely explained and communicated; with ſeveral other Matters of great Importance, which, duly attended to, will contribute, not only to the Eſtabliſhing the Brewery upon a better Footing, but manifeſtly augment the* Health, Pleasure, *and* Profit, *of the Subject in general.*

CHAP.

CHAP. I.

Of ſeveral Errors and Abuſes committed in making BARLEY *and* WHEAT MALTS.

MALT, like many other Artificials, is moſt genuine, when it is neareſt to its Original Nature; and that is ſo, when it is of a white or pale Amber Colour, as the Barley receives the ſame from the Earth; for, if it is otherways, it is occaſioned by ſome Violence done to its Nature; as when it is over-ripe, or waſhed by Rains to a great Degree after it is mowed, or by its being heated too much in the Mow: So likewiſe is it in Malt, whoſe true Tincture and Colour proceeds from its fine Spirits, and eſſential Vertues; for, when the Colour is changed in making, the Virtues of it are alſo; that gives the Drink a different Nature, occaſioned by ſome Violences done to the Spirits, and fine Properties of the Malt, by the fierce Spirits, and hot Vapours of the Fire, that change its mild Qualities into their own fiery Nature; which makes it plain, that all Digeſtion is moſt natural, that preſerves its true Colour moſt intire; ſo that the high-coloured Brown Malt is parched, and brought, by the Potency of the Fire, into a State very remote from that Purity, which the true made pale or light Amber-coloured Malt enjoys; from whence is produced the high Blood-coloured Ales and Beers, that many ignorant Perſons cry up and admire as a Vertue or good Quality. But to be more particular on this Subject of Malts, I ſhall recite the Opinion of two Phyſicians that have appeared in Print: One ſays, — "The Contrary is to be "underſtood, and nothing in Malt is a greater

" Vice or Evil, and the Drink made thereof, toge-
" ther with its long Boiling with Hops, does ſel-
" dom fail to wound the Health of the Drinkers
" thereof; its natural Operation in the Body, is to
" heat the Blood, deſtroying Appetite, obſtructs the
" Stomach, ſending groſs Fumes into the Head, dulls
" the fine pure Spirits, hinders the free Circulation
" of the Blood, by ſtagnating the Humours, and,
" in the choleric and melancholy Complexion, gene-
" rates the Stone, Gravel, Gout, and Conſumpti-
" on: This Sort of Drink is alſo very injurious to
" Women, eſpecially ſuch as are with Child, or
" give Suck."——The other, who is a more late Writer, and one of the greateſt Reputation, ſays, " That Brown Malt makes a Drink much leſs viſ-
" cid than the Pale, and fitter to paſs the ſeveral
" Strainers of the Body; but what is very ſtrong of
" it, may be uſed in Exceſs, enough to bring on ſe-
" veral Inconveniencies of Health; though a ſingle
" Debauch with it much more eaſily wears off, than
" one occaſioned by Drink made from Pale Malt:" The ſame Author further enlarges, and ſays,——
" That Pale Malt has certainly moſt of the Grain
" in it, as being ſlendereſt dry'd, and is therefore
" moſt nouriſhing; but alſo for that very Reaſon re-
" quires a ſtrong Conſtitution ſufficiently to digeſt
" it. Thoſe, who drink much of it, are generally
" ſleek and fat in the Bloom of their Age; but if
" they are not ſuddenly cut off by Fevers, as they ge-
" nerally are, they fall very early into a diſtemper-
" ed old Age, and hardly ſupport the Burden of
" Life, with the Retinue of Diſeaſes."——Hence it appears, that the Pale and Brown Malts are Extreams, one being too ſlack, and the other too high dried; which made the former Perſon write, that all Extreams were a Degeneracy from the Nature of true Amber Malt, made by a mild and gradual Operation; for then it would not be ſo apt to ſend dulling, groſs, thick Fumes and Vapours into the Head, nor

to

to heat the Blood, or obſtruct the Paſſages, eſpecially if Drink, made from ſuch Malt, was of a middle Strength, and uſed before it was ſtale; then it would deſerve the firſt Place of all fermented Malt-Liquors, and be the beſt againſt the Generation of the Stone, Gravel, and Gout.

The ſecond Error is, that, though Amber Malts are truly the beſt of all others, yet, in the making of them, there is often a great Abuſe committed by ſeveral of its Makers, and that by an unnatural Drying of it on the Kiln, which is done out of a covetous Deſire of drying a great deal of Malt at once, in order to ſave Fire, Time, and Labour: To do this, they put it ſeven, ten, or twelve Inches thick on the Kiln; which never fails damaging the Malt; for, the thicker it lies, the ſtronger the Fire muſt be kept, which will be apt to burn that which is next the Hair-cloth, whilſt that, which is uppermoſt, is neither hot nor cold, and thereby are the ſweet ſpirituous Parts flattened; for, notwithſtanding all the Diligence that can be uſed, there is no Drying it equally, becauſe the Thickneſs thereof will force it to ſend damp excrementitious Vapours, which Effluvia conſequently re-enter ſuch Malt, wounding and ſuffocating the finer Vertues and ſweet Qualities, which gives an ill Taſte to the Malt, and the Drink made thereof: Beſides, it makes but little Drink, and that not good, nor wholeſome: And, if ſtrong Drink is made thereof, its evil Juices are more perceptible by heating the Body, and ſtupifying the Senſes by its groſs, heavy Fumes, which renders ſuch Malt a great Enemy to Nature; for ſure it is, that every Fault committed in the making of it, affects the Drink more or leſs; which has begot an Opinion, that there is hardly one Buſhel in four rightly made throughout the Nation; and this is chiefly the Reaſon there are ſo many bad Sorts of Beers and Ales: Whereas, formerly, they uſed to be ſo careful to let the Malt lie only three, four, or five Inches thick on the Kiln at moſt, with

a conſtant Fire, not too fierce, and yet indifferent briſk, which preſerves the Spirit and Life of the Malt; for it may as well be too ſtrong, as too weak; when too weak, it flattens and dulls the ſpirituous ſweet Qualities; and, when too ſtrong, it fires and ſtagnates them.

The third Error is in drying Malts. They are apt to be tainted by the Smoke, through the Careleſsneſs, Covetouſneſs, or Unſkilfulneſs of the Maker. For Smoke, as a learned Pen defines it, is a ſtupifying, keen Fume or Vapour, full of dark ſulphureous Excrements, caſt forth by the Fire, containing a groſs Humidity, and fiery ſharp Qualities, very pernicious to Health, as it proceeds from the poiſonous Juices of the Coal, Wood, *&c.* For Fire divides and ſeparates the Forms and Properties of Nature; it is an Excrement all People deſire to avoid, as being prejudicial to the fine volatile Spirits, and therefore offenſive to the Eyes, where the natural Spirits have their Paſſage; for which Cauſe Smoke does firſt offend the Eyes, or any other ſtupifying Steam, inwardly or outwardly; wherefore, when any ſmoky Drinks or Meats are ſeparated in the Stomach, the Fume or Vapour thereof naturally aſcends to the Head, and is very offenſive to Nature, eſpecially the Eyes (as Coal or Wood Smoke does) for it contains two pernicious Qualities, a fulſome Bitter, and a ſtrong Aſtringent. Therefore all the Care poſſible muſt be taken that it is ſmoaked as little as can be; for that Smoke helps to advance the dull, heavy, reddiſh Colour in Drink, which ſhews the Excellency of the late Invention of drying Malt with Coak or Culm: And alſo the pernicious Practice of drying with Wood, Furz, or Fern, *&c.* which yield a moſt diſagreeable Smoke; yet muſt it paſs through the ſeveral Kernels of the Malt, and thereby impregnate them with its bitter, fulſome, unwholeſome Qualities; which does not a little raiſe my Deteſtation and Abhorrence of that common

Error and Impoſition on the Ignorance of the People; and the more when I conſider the great Quantities of ſuch Malt, that are annually conſumed in ſome Parts of the Weſt of *England*, and ſome other populous Cities and Places, in their Butt-Beers and Ales, notwithſtanding the ſmall Difference of Charge that there is between drying with Coak, Culm, and Straw, and with Wood, Furz, Fern, Peat, and Stubble, beſides the great Inconveniency of the Wood-fire, that cannot be ſo ſoon checked nor extinguiſhed as others are, which expoſes the Malt to a Damage accordingly.

The fourth Error is a very knaviſh, ſubtle one, indeed; and that is what tempts ſome Maltſters to ſuffer the Barley but to half ſpire, ſhoot or ſprout, on the Floor, in order to ſave Time, Labour and Charge; and then ſuch Malt will have a third, fourth, fifth, or ſixth Part Barley in it, which conſequently muſt deceive its Brewer; for the Barley Part will never yield its Goodneſs like that which is malted, and ſo the Drink becomes in a great Meaſure ſpoiled.

The fifth Error is, what is called in the Cant of a villainous Maltſter, *Dreſſing of Malt*, but, honeſtly explained, it is no other than a Bite on the Buyer, and is thus managed: Before the Malt is carried out to anſwer its Sample or Boyce, a Man takes a Garden-Pot, and with it ſprinkles Water over the Out-ſide of a Heap; then with a Shovel he turns it, and does the like, and ſo on till he thinks it enough. Thus he plumps and ſwells the Malt Kernels, that to the Buyer ſeem bigger than the common Sort, and contain more Flour than the ſmaller ones can: But this Artifice carries three Reaſons with it: One is to forward its Sale, the other to enhance the Price, and the other to fill the Buſhel with fewer Corns. The Truth of which would plainly appear, if ſuch Malt was afterward to be kept in a Heap a Month, two, or three; for, in that

that Time, it would grow muſty, or matt together, and very likely to breed thoſe devouring Inſects call'd *Whools*.

The ſixth Error and Abuſe, is owing to the Careleſneſs of the Maltſter, who either himſelf, or by ſuffering others with their Shoes to tread on many of the Corns of the Malt while they lie working on the Floor, which is often attended with ill Conſequences; for, by bruiſing the Kernels, there immediately commences the Growth of a Canker, that will ſhew itſelf in a Bunch, turn green, and perhaps one of them may infect ſix ſound ones, and more, if the Misfortune happens to be in the Month of *March*, *April*, and *May*; by which Means a great deal of Drink has ſuffered in its Taſte, and proved unwholeſome to the Drinker. For this Reaſon a careful Maltſter will put on a Pair of Shoes made of an old Hat; and indeed, it is a Pity the Exciſeman is not obliged to do ſo too; and then, in my Opinion, there would be leſs Damage done by dirty hard Shoes in the Malt-houſe; for as he walks between the Heaps, ſometimes for near twenty Yards together, there commonly lie many looſe Corns that are unavoidable to the Tread, and theſe conſequently muſt be bruiſed and cankered, to the great Prejudice of the Maltſter, and more to the Drinker of Liquor made from ſuch unwholeſome Kernels. So likewiſe have I Reaſon to write againſt the careleſs Turner of the Malt, who often, I may ſay, is guilty of doing the like Damage to the Malt by his Shovel, when it is employed in the Movements of the ſeveral Heaps, where it neceſſarily breaks and bruiſes many of the Kernels, by jobbing it in amongſt them, and ſcraping along the Floor. But theſe are but few in Compariſon of the many others that are incident to Barley and Malt.

CHAP.

CHAP. II.

Of WHEAT-MALT.

WHEAT, as it is the moſt excellent Grain of all others, and as ſuch appointed by the Creator for the Nouriſhment of the human Body as an Eatable, has tempted my Pen to publiſh alſo its fine Quality in producing a good Drink, that no other Grain whatſoever can equaliſe for its peculiar Vertues; which has ſurpriſed me to ſee that Wheat-Malt ſhould be neglected, though this Grain has been ſold in our Markets at three Shillings *per* Buſhel, a few Years ago, for three Years together, and only Barley and Oat-Malt in Reputation: Whereas this at three, I believe, I may venture to aver, is upon a Par with Barley at two Shillings, and Oats at one Shilling and Six-pence *per* Buſhel for making of Malt, and far beyond both for making ſtrong Beer; alſo particularly for that famous and nutritious Liquor Mum, that has for ſome Years paſt been made by the *Germans* and others, to the juſt Reproach of the *Engliſh*, who, thinking themſelves compleatly furniſhed by Barley and Oat-Malt Liquors, have ſupinely neglected the Improvement of the beſt of all others, and that is Drink that might be made from this delicate Grain, Wheat, for the following Reaſons, *viz.*

FIRST then, the Flour of Wheat is much finer than that of Barley; and, the finer the Flour, the finer the Drink; ſo alſo is the Bread made of the one and the other, that bears very diſtant Proportions of Goodneſs: The Wheat eats ſmooth, mellow, ſweet, light, and nouriſhing; when the Barley eats rough, coarſe, moiſt, heavy, and is ſcouring: Wheat-Malt alſo differs much from Barley-Malt; for the former, if well made, will return a pleaſant, briſk, nouriſhing, wholeſome Ale and Beer; while Barley-Malt is apt to make a more

heavy, ſcorbutic, and leſs nouriſhing Liquor; becauſe,

Secondly, This Wheat-Malt is more natural to the human Nature, as it is made from the Staff of Life, provided it is not too high dried, and the Goodneſs burnt away to pleaſe the Fancy with a high coloured Drink, and ſo loſe the pureſt Subſtance of the Malt according to the Proverb:------I do not care how white my Bread is, nor how brown my Drink is.------But this Proverb was firſt on Foot, before the Method of making Pale Malt was known: Alſo if this Sort of Malt is made from impure Wheat, then good Drink muſt not be expected from it; for, ſuch as the Malt is, ſuch will be the Drink; as for Example: In a cheap Time of Wheat, and in a dear Time of Barley, which ſometimes happens, it has been the Practice of a certain Brewer (I have been told) to buy up the ſmutty Wheat, at a very low Rate for making Malt; becauſe, when Wheat is thus damniſied, there are few that care to make Bread with it, unleſs it be in a dear Time: But when ſuch Grain is malted, it is leſs perceived in Keeping Butt-Beers, than in Bread: Beſides, in malting, the black or ſmutty Part of the Kernel is better loſt than in the Wheat-mill; for here the Working of it on the Floor and the Fire of the Kiln cure that in a great Meaſure which the Stone cannot, becauſe the good and the bad Parts are mixed and ground together; when, in malting, they are better ſeparated and cured, yet not wholly diſcharged from the Tincture of the Smut, which is the bad Part of ſuch Wheat-Kernel.

Thirdly, It has been experienced that the *Dugdale* or any other coarſe Wheat, will make good Malt and Drink, which may be a valuable Opportunity to many, becauſe this Sort of Wheat grows only on ſome Ground, and in ſome Countries where others cannot be conveniently had, as in many Places of the North; and alſo on ſour Grounds in the South,

this

this Wheat will beſt grow, and be a ſurer Crop than any other Sort; nor will it be damaged by Blights and Wets, when others are, by Reaſon of its great Out-guards, its Beards. This Sort of Wheat alſo is ſold conſiderably cheaper in the Markets than any other, as being of a coarſer Nature than the reſt for making of Bread, but little inferior in Goodneſs for making of Malt, which gives an advantageous Opportunity, to a Perſon that thinks fit to make Malt of it, to enjoy its Ale or Beer at a low Price.

Fourthly, This Wheat-Malt has an admirable Quality in it, that no other has, and that is, the Drink of it will never be windy, which is a pernicious Quality inherent to moſt other Liquors, and is very unwholeſome in Barley and other Malt-Drinks; but this, whether in Barrel, or Bottle, and kept ever ſo long, will always be free from that miſchievous Effect.

Fifthly, The Goodneſs of this Malt diſcovers itſelf in making more potent Ale and Beer, than any other Sort can; for if eight Buſhels are allowed to a Hogſhead, and ſuch Liquor be made too free with, at only nine Months Age, it will be very apt to intoxicate, but with leſs Prejudice to the Health of the Drinker, than any of theſe unwholeſome Barley-Malt-Liquors, whoſe Bodies are too commonly loaded with large Quantities of that pernicious Acid, Yeaſt.

Sixthly, This Malt is beſt made when it is managed by the Workman with Carefulneſs and Labour, ſoaked in good Water, and to have its due Time in the Ciſtern, Couch and Kiln. This is the main Art of making Malt; becauſe, where it is worked too faſt, and too hot, ſuch Malt will certainly fail anſwering our Expectation. And ſo it will if the Wheat by Wets has firſt grown in the Field after Reaping, or heated too much in the Mow; for then this, as well as Barley Malt, is very apt to rot in the Couch; and when it is laid on the Kiln to dry, it muſt be ſpread thin, and have a leiſure Fire; otherways this Malt can never be well made, which reminds

reminds me of an Inn-keeper's Anſwer, (who brewed his own Drink) when I aſked him the Reaſon, why his Drink was ſo bad? He replied, That it was the Fault of the Maltſter, who would not allow the Malt a due Time on the Floor nor Kiln. And ſo it is ſure enough with too many of them, who, to ſave Time, Labour, and Charge, run off the Malt too faſt to be well made: But, if you will have Wheat-Malt in a right Condition, it muſt have a due Time on the Floor, that it may ſpire gradually, and a ſlow Fire in the Kiln, that its flowery Part may be ſoft and in full Body: Then its fine ſpirituous Balſamic Qualities will be preſerved in the Malt, and be communicated to the Drink, whereby it will anſwer thoſe Ends that I have here propoſed. In ſhort, the Ale or ſtrong Beer made with Wheat-Malt, is thought by many that have proved it to be the very beſt of all Liquors.

Of Water for Brewing Wheat-Malt.

THIS Element is particularly to be regarded as it affects Brewing; becauſe there is no making of good Drink without good Water, be the Malt ever ſo kind in itſelf; nay, it is of ſuch Conſequence with Regard to our Diet, that, as an eminent Phyſician has lately obſerved, we cannot be too inquiſitive into its Nature and Difference; nor too ſollicitous and nice in our Choice of it; and therefore charges the Inhabitants of our great City with a groſs Neglect in this Reſpect, for chuſing of ſtagnating impure Clay Well-water for brewing of Beer, and making other Drinks.

Of Brewing Wheat-Malt.

THE Art of Brewing well, next to good Malt, Water, and Hops, is certainly of great Conſequence; becauſe, let a Perſon have all theſe in their full Perfection, yet he may eaſily ſpoil and marr all, if he does

does not underſtand the true Method of making them into Ales and Beers; and for this Reaſon it too often happens amongſt thoſe that caſually hit on the right Way at one Time, and miſs it another, to lay the Fault on the Malt, Water, or Hops, in Extenuation of their own Ignorance; when, at the ſame Time, they are the ſole Cauſe of the Misfortune for Want of due Judgment in this uſeful Science: I ſhall therefore here make it plain to mean Capacities, how they may obtain good Drink from good Ingredients.

And, firſt, I will ſuppoſe my Copper to hold thirty-ſix Gallons, which is a Size ſufficient for an ordinary Family, and that I am to brew ſix Buſhels of Wheat-malt, for making a Hogſhead of good Family-Ale; for which Purpoſe I have a good ſoft Water from a Chalk or Stone-well, or clear Water from a River, Rock, Pond, or from Rain: A Copper, full of this, I heat as faſt as I can under the Cover of a Peck of the hully Part of the Malt, or of Bran, which will expedite its Heat, and clear the Water; ſo that it may be ſkimmed off for the Hogs, or put into the Maſh-tub with the Water when it is ready to boil or juſt broke: Then either let it lie till the Vapour is ſpent, ſo that you may ſee your Face in it, or, as ſoon as the hot Water is put into the Tub, put a Pail or two of cold into it, which will temper it at once, and keep the Spirit of the Water from evaporating: Then immediately put five of the ſix Buſhels of Malt into the Tub by Degrees, ſtirring it with a Paddle or Oar juſt to keep it from balling and no more. When this is done, ſpread the Reſerved Buſhel all over the reſt, and let it remain ſo two or three Hours. Thus not only the Spirit of the Water is preſerved, but likewiſe that of the Malt, which will ſurely greatly improve the Drink, by giving it a fine Hauguſt, or a true Tincture of the Malt: Then turn the Cock about half Way, and receive three or four Hand-bowls full of the thick Part, and return it over the Malt, and ſo continue till it runs perfectly fine; for on this

depends very much the obtaining of clear Drink in the Barrel; and therefore the nice Brewer will ſpend it off as ſmall as a Straw, and let it run into the Under-back or Tub on three or four Handfuls of Hops; and, when four or five Gallons are thus run off, lade over three Hand-bowls or Gallons of boiling Water on the Malt, and immediately put as much cold Water into the Copper to ſupply their Place, which will be at the full Heat again by the Time the laſt are diſcharged, and ſo continue lading over hot, and filling the Copper with as much cold Water, till a Copper of the firſt Wort is run off, which muſt be ſet by for ſome Time in a large clean Tub too, and it will take no Damage; for the Strength of the Malt and a few more Hops will preſerve it ſound. Then proceed and put over another full Copper of ſcalding Water by three Hand-bowls at a Time on the Goods, free of any cold Water, till all is expended; which, when done, put this ſecond Wort into the Copper by itſelf, and boil it away briſkly for Half an Hour; then put in a Pound of looſe Hops, and boil it again Half an Hour more; by which Time I will ſuppoſe the Wort to be broke enough. But, to be more certain in this material Point, you may, as ſoon as the Wort begins to boil, put in a Pound of Hops in one or two canvas or other coarſe Linen Bags, and boil them only Half an Hour as faſt as can well be done, when they muſt be taken out; and the Wort kept boiling on, till the Particles, which will be very ſmall at firſt, become larger and ſome ragged; then it is truly boiled enough, and muſt directly be put into the Backs or Cooling-tubs to lie thin, not above four or ſix Inches thick.

As ſoon as the ſecond Wort is out of the Copper, put in the firſt, and boil it away in the ſame Manner, and with the ſame Quantity of freſh Hops, as you did the laſt, taking Care to keep back the looſe Hops that were firſt put in to preſerve it while in the Tub, and when the Particles are ragged, diſpenſe it into the Coolers.

THUS you will give both the Worts and the Hops their thorough Boiling in the Copper, and thereby enjoy their fine floury and ſpirituous Parts, and avoid their groſs, unwholeſome, and phlegmatic Ones; for unleſs they have their due Cure here, the Drink can never be right clear and good in the Barrel. But obſerve, that

THE ſecond Wort will never break ſo ſoon as the firſt; and even that will be ſooner or later, according to the Nature of the Malt, Water, &c. which is the Reaſon that a limited Time of boiling muſt not be truſted altogether to, for a true Indication of the Wort's being enough; and therefore it is neceſſary to make a right Judgment of it, by viewing a little of the Wort now and then in a Hand-bowl, till it appears as I have before mentioned.

I KNEW a ſkilful Brewer that never ſtopped his Cock after it was once ſet a running, till he had all his firſt and ſecond Worts run off; which has this excellent Conveniency in it, that the Goods or Grains have then no Power to ſour or taint the Wort by its ſtanding on them; a Misfortune that has ſpoiled many Thouſands of Barrels of Drink, brewed after the old Faſhion: And when he had thus ſtopped his Cock, and maſhed up the Grains with ſuch a Quantity of cold Water, as he thought fit for his ſmall Beer, he let it ſtand altogether an Hour in cold Water, and ſomething leſs in hot, before he drawed it off; then would boil it Half an Hour with ſome freſh Hops, and an Hour after that by itſelf; for ſmall Beer Wort muſt not be expected to break at all.

BUT by ſome a Cover is made Uſe of, while the Water is heating or boiling in the Copper, and by many while the Malt lies liquored in the Maſh-vat, that the Steam or Vapour may not evaporate. I alſo ſolicit your Care, on Account of the Wort's breaking in Boiling, which you may likely perceive, if you ſlack your Fire in Half or three Quarters of an Hour; and then, if the Hops are all ſunk, the Wort appears

clear like Sack at Top, and the ſmall Particles play about like Knits; then let it boil a little longer, and they will be as big as Lice with Rags or Flews about them; that are ſure Signs of the Wort's being boiled to the Height; and this will ſooner happen, the more furious you boil it; but, if you boil it much longer it only waſtes, and rather hurts it; nor will it work ſo well in the Vat, nor fine thoroughly in the Caſk; becauſe then it will obtain a more viſcous Body; for as it comes out of the Copper, in ſuch a Degree of Fineneſs, it will come out of the Barrel. But obſerve, that pale Malts will not break ſo ſoon as Brown, nor the ſecond Wort ſo ſoon as the firſt, and ſmall Wort not at all.

CHAP. III.

Of the good and bad Properties of the Hop.

I Have here undertaken to write of one of the moſt ſimple and pureſt of Vegetables, and yet, perhaps the moſt abuſed of any other, both in its Uſe and Character. The pureſt, I ſay, becauſe of the many fine odoriferous, aromatic Spirits that the Hop is indued with, as appears by the Senſe of Smelling on their being rubbed and held to the Noſe, and which are eaſily communicated to any Liquid, as theſe Spirits have their Reſidence moſtly in the outward Parts of the Hop, and are ſo tender, that they are not to be retained without being rammed and bagged to prevent the Air's Attraction, and the Eſcape that their fine Spirits are always ready to make: And for this Reaſon it is, that new Hops are ſo preferable to Old; becauſe, notwithſtanding all the Art that can be uſed, yet with Time will their ſubtile Spirits be expended in ſome Degree, and diminiſhed in their Virtue as they lie in the Bag. But when this floury pure Part of the Hop is

ſingly and rightly obtained and incorporated with Ale, or Beer, it then adminiſters a moſt balſamick, opening, and penetrating Quality to the Body of Man, that, the Virtuoſo's in Phyſick declare, will powerfully purge by Urine. And therefore are a ſpecial Remedy againſt breeding the Stone, as well as a great Strengthener to the Stomach by its aromatick bitter Quality; and, by its diſcutient and aperitive Nature, good in all Obſtructions of the Viſcera, and particularly of the Liver and Kidneys. It is this noble Property that gives the Ale and Beer a fine Flavour, and cauſes that ſmooth Guſt and pleaſant Taſte to the Palate, which, after a proper Age in the Malt-liquor, every Drinker enjoys both in Mouth and Body, and is the true homogenial Quality created for the Service of Man; and not only in the Hop, but in all other Kinds of Vegetables; to preſerve which, the Curious make their Raiſin and other Wines, only by infuſing their tender Ingredients in hot Water, as knowing that Boiling would extract their worſe Part, and evaporate their better: As is alſo plain in expreſſed Vegetables, particularly the Apple, whoſe firſt ſtrong ſpirituous Juice, or Running from the Preſs, exceeds, for Taſte and Health, the weak groſs Parts of the ſecond; and for this Reaſon it is that Wormwood, Broom, Century, Tanzy, Sage, Carduus, or any other bitter Herbs, ought to be firſt dried, and then not ſuffered to infuſe above a Quarter or Half an Hour at moſt in Wort; for in theſe there are harſh, earthy, auſtere Particles that are very ready to be emitted, and the warm Wort will quickly bring forth thoſe worſe Parts that will devour, ſuffocate, and deſtroy, the fine ſpirituous Virtues, and cleanſing Properties, and then ſuch Drink becomes of a hard, harſh, aſtringent Nature, apt to obſtruct the Stomach, and ſend Fumes and Vapours to the Head, heating the Body and Blood too violently. And thus it is with the Hop when imprudently uſed; therefore the common Way of infuſing and decocting Herbs, a long Time, is injurious to Health. As, for

Example, formerly they put a Quantity of Wormwood into their Butt-beer, and there let it lie infuſing, or rather rotting, four or ſix Months, till all the Drink is drawn, whereby the opening, penetrating, briſk, fine Spirits of ſuch Vegetables are totally deſtroyed, and in their Room the Beer is impregnated with their terrene and ſaline Parts, which contain harſh, bitter, churliſh, and inimical Properties. For this Reaſon, ſays a Phyſician, ſuch common Wormwood-beer does not only hurt, but by Degrees weakens the natural Heat of the Stomach, and ſends heavy, dull Vapours into the Head, and ſo prejudiceth the Eyes. The Hop alſo, beſides its fine volatile ſpirituous Part, which is readily extracted by a gentle warm Infuſion, and is a moſt agreeable wholeſome Bitter, has likewiſe an innate, groſs, terrene, and ſaline Part, which is thoroughly communicated to the Liquor by long Coction or Steeping, and is a hot, very acrid, unwholeſome, and diſagreeable Bitter, yet is deemed, by the undiſcerning Vulgar a good Property. Indeed, ſtrong and fierce it is, but ſo far from being a Virtue to the human Body, that it certainly is injurious and deſtructive to it, in breeding the Stone and other Diſeaſes. Hence it is, that all Drinks, eſpecially the ſtrong ſtale Sorts, that have the Hops boiled in them two or more Hours, ſtrike the Palate with a harſh, rough, unpleaſant, bitter Taſte; and yet it was but very lately that I happened to be in a Brewhouſe at *London*, where they wetted about thirty Quarters of Malt a Week, that the Maſter preſented me with a Tankard of his ſtrong Beer, applauding it at the ſame Time for having ſix Pounds of Hops boiled two Hours in each Hogſhead; which is perfectly heterogeneous to the true Management of the Hop, though he ignorantly extolled his Skill in a bad Action; for, both in the Hop and all other Vegetables, it is but loſt Labour to boil or infuſe them, beyond their firſt pure Spirit. Therefore boiling the Hop afterwards is not only ſuperfluous, but injurious, and

ſerves

ſerves only to raiſe and induce thoſe acrid, bitter, and noxious Particles that ſo greatly damage the Drink; yet were never intended for the Uſe of Man, as being hurtful to his Nature, when unduly ſeparated from its better and light Parts. How much then does the ignorant Man abuſe his Health, when his whole Drink has this ſecond and worſe Part of the Hop boiled in it! Alas! I cannot help being concerned for my Fellow-creature, and pity his ſupine Negligence in not regarding any Hints of this Nature, when it has been told him, becauſe ill Cuſtoms have greater Power over a Man than Law or Nature, and nothing but a long Practice will convince the unlearned and obſtinate Man. But, to prove my Aſſertion plainer, let any one take a Pot of Beer and Ale, and, while it is warming, ſtir in it two or three Sprigs of Wormwood, then take it out, and let it drip into the Drink, and he will find it preſently bittered with the true fine Flavour and Spirit of the Herb: By all which, I think, I have ſufficiently made appear, that the good Part of the Hop conduces to Health, while the bad Part deprives a Perſon of it. And ſo in moſt other Vegetables there are, ſurely, healthy and unwholeſome Parts, that muſt be managed accordingly, to enjoy the one and to avoid the other.

I COME now to treat of the Uſe of the Hop, as it relates to Brewing. This fine Vegetable, therefore, I can now affirm, has at laſt obtained a juſt Reputation in ſome Parts of the Nation, under the due Notion of its good and bad Properties, by the Gentleman and Tradeſman. As to the firſt, I know ſeveral that have been ſo nice in its Uſe, that they allow but Half an Hour's Boiling the Wort and Hop for *October* Beer, as the common Brewer (I am told) does his *Dorcheſter*, as well as ſeveral Tradeſmen that I am acquainted with: And one Gentleman, more careful than all the reſt, is ſaid to boil both, only a Quarter of an Hour, but, in my humble Opinion, they are none of them right yet; for, though the Hop by Half an Hour's Boil-

ing in Wheat or Barley-malt Wort, has its full Time allowed it, I think the Wort has not; and therefore the ſeveral Beers that I have taſted, of ſeveral Perſons brewing this Way, all of them, to my Judgment, were rather too ſharp, which I impute to the Under-boiling of the Wort, as not having its due Cure in Boiling, that naturally renders it in ſome Degree ſo with Age, notwithſtanding the Hop's Power; for, if it has not its Cure in the Copper, how ſhould it in the Barrel? Boiling being appointed for the firſt Digeſtion of the Wort, and that will certainly be deficient, if the coheſive Parts of the ſoft Wort are not broke and hardened; then it will anſwer two great Ends, *viz.* Firſt, when the Wort is ſo much boiled (which commonly is in about an Hour) that it curdles and breaks into large Particles, it will be capable thoroughly to ſettle in the Barrel, without which it can never be truly fine, nor healthful, but conſequently will be the Cauſe of Gravel, Stone, and Cholick in ſome Conſtitutions; for that the ropy, tenacious Parts of the Wort are not communicated, ſeparated, and diſcharged, ſufficient to make its true *Fæces*, till it has its mature Boiling. Secondly, by this Cure of Boiling, the Wort is divided and hardened, conſiſting of numberleſs individual Particles, which gives a greater Power to the Yeaſt by Fermentation, to make an eaſy Diſcharge of their excrementitious Parts, and ſo is more able to reſiſt Eagerneſs and Putrefaction; witneſs the Wort that is brewed for making, what is vulgarly called, *Vinegar*, which being neither boiled nor hopped, but only fermented, will in a very few Days Time make this Aleager or Vinegar, if it is ſet in the Sun, or by a Fire. It is true, indeed, that the Bitterneſs of the Hop does naturally hold the ſweet Body and volatile Spirits, aad as it were captivate them, being their mighty Defender againſt thoſe keen Properties, that otherwiſe would advance and devour the ſweet mild Qualities. But then, as I take it, this Power of the Hop is confined only

only to the State and Condition the Beer is in, when firſt put into the Barrel; and therefore if ſuch Drink is turned in any imperfect undigeſted State, for Want of its right Boiling, it will not be improved by the Hop beyond its original Nature.

Now, that both the Wort and the Hop may have their due Cure, in the Copper as well as the Barrel, boil the Wort by itſelf Half an Hour, and then rub the Hops well, and put them into the Wort, either looſe, or in a Bag or two, and boil all together briſkly, till the Wort breaks, as I ſaid before; then ſtrain it into the Coolers very ſhallow. The Quantity of Hops on this Account for a Kilderkin of *October* Beer ſhould be, at leaſt, three Pounds, to be tapped at nine or twelve Months End, according as the Drink is mellowed and the Hop rotted, and ſo for Ale in Proportion to the Strength of the Wort, and the Time it is to be kept. To pleaſe my own Palate, I boil two Pounds of Hops in a Hogſhead of mild Ale, the laſt Half Hour, and find it anſwers extremely well, tapped at about ſix Weeks End, without Regard to the hot Seaſons of Bloſſom-time in brewing it, as being under no Apprehenſion of Miſcarriage, provided my Malt, Water, Hops, Yeaſt, and Conveniencies are all in due Order. But, to be ſafe in this Management, you may put a little Wort (ſomewhat cooled) upon the Hops, before they are put into the Copper, to prevent what we call *ſcalding* them; and then the Hops will emit their Vertue more free, ſooner, and regular, that when their Vertue is locked up in them by the fiery Heat of the boiling Wort, there being alſo a reſinous and clammy Nature in the Hop, which is beſt opened and divided by a previous gentle Heat; or, when you have boiled one Parcel of Hops in a Bag Half an Hour, as I ſaid before, you may take them out, and boil ſuch another Quantity of freſh Hops till the Wort breaks; and thus a ſmall Bag may be uſed in a little Copper, which may not ſo well agree with a large Veſſel.

CHAP.

CHAP. IV.

Of the Nature, Prevention, and Cure of tainted foxed Utenſils *and* Malt-Liquors.

THIS is a moſt neceſſary Article in Brewing, and one of them that has been the leaſt taken Notice of by Authors, although of the utmoſt Importance; becauſe, by this Evil, there have been many thouſand Barrels of ſtrong and ſmall Drink ſpoiled, both by common and private Brewers, who generally ſeem more wanting in this Knowledge, than of any other Branch of Brewing; and therefore, if my Pen can be ſerviceable to the Publick, in remedying this grand Misfortune, I ſhall account it a valuable Opportunity of making known what I have learned and experienced in this Affair, in order to prevent thoſe great Quantities of diſtempered Beers, Ales, and other Liquors, from coming into the World for the Future, as have been for many Years paſt, to the great Damage of the human Body; becauſe when theſe Drinks are thus tainted, they can never be made thoroughly ſound and fine in the Barrel, but will remain always in a nauſeous, unhealthy, thick Condition, and be offenſive to the Taſte and Stomach; which undoubtedly will contribute to the Breeding of Diſeaſes, and that by Reaſon the Misfortune conſiſts firſt in the tenacious Thickneſs or Ropineſs of the Drink, and the evil ſtinking Scent that ariſes therefrom, which has brought it under the Denomination of being *foxed*, and, indeed, is juſtly deſerving of that or a worſe Compariſon. Now to account for this Diſaſter, it is generally allowed to proceed from Six Cauſes: *Firſt*, From the Naſtineſs of the Utenſils. *Secondly*, By the Filth and Corruption of the Water. *Thirdly*, By taking the Liquors in wrong Heats. *Fourthly*, By the Muſtineſs or other Damage

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in Malt. *Fifthly*, By the Wort's lying too thick in the Coolers. *Sixthly*, By letting them too hot into the Tun, or fermenting them while they are ſo. By all which, or by any one of theſe Ways, may this abominable Sickneſs in Beer or Ale be bred, as new Milk is ſoon turned and ſpoiled when put into unclean Pans; for this, like Wort, is of a pure Nature, and therefore the leaſt Naſtineſs is, in ſome Degree, prejudicial to them, becauſe all Dirt, Sullige, and Fur, that is left in the Crevices, and on the Sides of the Tubs and Utenſils, contain in them a certain Acidity, that, like Rennet in Milk, ſours and turns the Wort, more or leſs, from its thin, pure, looſe Parts, into a *fætid*, ſtinking, treacle Conſiſtence, which commonly remains in it to the laſt, and will rather increaſe than decreaſe; ſo that ſuch Beer or Ale can never be made truly ſweet again by the Art of Man; but, as ſuch, will taint and poiſon the Coolers, Tuns, and Barrels in which it lies, for I have known it ſo predominant, that it has not been got out for a Week or more together, to the great Prejudice of both Seller and Buyer. And ſometimes I have heard of a whole Guile together of ſtrong Drink having been turned down the Kennel, as not fitting (when the Taint is in a Degree) to be carried to a Cuſtomer's Houſe. But, to cure this horrid Misfortune, ſome are ſo ſilly, among the private Brewers, to waſh their Tubs or Coolers with only boiling Water, as thinking it the readieſt Way to ſcald it out; but, in Truth, it is ſcalding it in; for boiling Water does only drive farther back into the Wood a certain ſour, fulſome Quality, that the former Wort left behind, and which the Wood of the Coolers or Tuns has ſucked in, the Humidity or ſweet Quality that the Wood receives from the Wort preſently turning ſour, very ſharp, and keen, eſpecially in the hot Seaſon of the Year; ſo that, when the freſh new Wort comes into ſuch Coolers and Tuns, it does moſt eagerly and powerfully attract and draw forth that lurking, keen, ſour, Quality that the Wood has imbibed and retained; which

which will occaſion the Whole to become ſometimes only pricked, or juſt tainted, and hardly perceivable to the Palate; but at other Times, when the Beer or Ale is infected very much, it is inſufferable both to Noſe and Palate; and then ſuch Drink will ſoon be ſour. And this is one great Reaſon why ſuch Quantities of Malt-liquors taſte ſo mawkiſh, raw, and ſoon decay. And I myſelf, about twenty Years ago, had no other Knowledge to extirpate and drive out this Enemy, than to ſcrub the Backs and Tuns with only Coal-aſhes and cold Water; whereas, in Truth, the Diſeaſe lies farther in the Wood than many imagine, and therefore is not to be got rid of very quickly, by ſuch a palliative Cure. No, the Remedy muſt be according to the Diſeaſe, for, in the Bottom of all Backs, Tuns, and cooling Tubs, there are Joints, down-right Pegs, or Dole-pins, which often receive and harbour the tainted Wort and Drink, and which are moſtly imperceptible to the Eyes. It is in theſe, I ſay, that the Diſtemper chiefly lies, and damages the ſucceeding Worts; for theſe Pins and Pegs are frequently ſwelled by Wets, and dried again by the Air, and ſo are the ſeveral Joints, whereby they firſt receive, and then hold ſuch corrupted Worts. Now, as there is the Depth of an Inch or two in many of the great ones, it muſt be ſuppoſed, that a haſty ſcrubbing their ſuperficial Part, with only Coal-aſhes and Water, is not ſoon capable of routing ſuch a potent Enemy, whoſe naſty venomous Acidity and poiſonous Nature lurk in the moſt ſubtle, difficult Places of the Backs, Tuns, and Tubs. Therefore ſome will put Stone-lime over good Part of their Bottoms, and Water over that, to lie two or three Days and ſlack, in order to burn the Taint away, which may do ſome Good. But then, as the Water and Lime acquire a plaiſtick Body, it becomes too thick to enter into the cloſe Joints, and about the Pegs, as a thinner Body can, and therefore, I ſhall preſcribe, I think, a much better Way, and that is: Take a Parcel of Wood-aſhes,

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made from Aſh, if they can be got, becauſe they are the whiteſt, ſweeteſt, and ſtrongeſt (but any other may do) and boil them in Water to a ſtrong Lye or Lee; the liquid Part of which lay over the Bottom of the Back, Tun, or Tub, ſcalding hot for ſome Time, that it may have an Opportunity to ſoak and penetrate into the Joints and Peg holes; then with a Broom ſcrub the Sides and other Parts of them. This will be an effectual Cure each Time it is uſed, if it is thoroughly done, becauſe of the great Quantities of ſearching fixed Salts, beſides Sulphur, that is contained in the Aſhes, which are contrary to the Nature of this Diſeaſe, and will prove a true Antidote; and if the Coolers, Tuns, or Tubs, are after each Brewing waſhed and ſcrubbed out with cold Water, and then with this ſcalding Lye, it will prevent and cure this Malignity better than Lime, Wormwood, or moſt other Methods; for it has been found, that a Lye-tub, though generally neglected as the worſt amongſt the reſt for a Cooler, has really proved the ſweeteſt and ſafeſt of any for that Purpoſe, provided there be no Soap mixed in it; if there is, it will ſurely fox it.

Or what Conſequence then muſt the Knowledge and Cure of this Evil be to thoſe, that, through mere Ignorance and Obſtinacy, have brewed for ſeveral Months, nay, I believe I may ſay, Years, in tainted Utenſils, without ſo much as a Jealouſy of the Misfortune they have actually laboured under. It is true, their Drink is ſometimes better, and ſometimes worſe, becauſe they are not always under the ſame Degree of Taint, but are never thoroughly ſound; yet, becauſe their Back, Tuns, or Tubs are not rankly damaged, all goes off under the Suppoſition, that it will be better next Time, which has been the true Reaſon that many home-brew'd Ale-houſe Liquors have juſtly bore the Name of bad Drink, and yet the Brewer ſo ignorant as not able to account for it.

I ONCE knew a Perſon that had only a Hogſhead Copper in *London*, and entered himſelf at the Exciſe-Office a common Brewer, that he might have one in the Score allowed him free of Duty, ſo at a Loſs, that he had a conſtant Fox in his Utenſils for two or three Months together, little or more, and which muſt have terminated in his great Loſs, had he not had the good Fortune to be a Partner in a great Brew-houſe.

I ALSO knew a Country-victualler that brewed two or three Times a Week, conſtantly foxed in his Tubs, and Barrels; but that was more than he knew himſelf, or would know; yet, by his putting a great deal of Malt in his Drink, and the Ignorance of the Drinkers, this unſkilful Brewer went on, and had his Share amongſt others that better deſerved.

ANOTHER Way to cure foxed or tainted Utenſils is, to take Bay-ſalt, and put it into your Coolers, Tuns, or Tubs, and ſtrew ſome on their wet Sides; then upon that ſcalding Water, with which when they are well ſoaked, ſcrub them very well. This Salt is allowed to be ſtronger and ſharper than the common Salt, and as ſuch will penetrate and enter into the minuteſt Joints and Pores of the Wood, where it will eat in, and eradicate the naſty venomous Particles of the corrupted Taint, and make a greater Cure at one Application, than Aſhes and cold Water will at ſeveral; ſo that Brewers, great or ſmall, need have no Apprehenſions of being damaged a ſecond Time, by the ſucceeding Worts or Drinks, if they will make a due Uſe of the Rules in this and my firſt Book, and of this famous Receipt that has often been tried and approved of, for anſwering this Purpoſe, by ſeveral eminent Brewers. This Salt, which is of a hot moiſt Nature, is that with which they make their Camp-cellars, by mixing it with Clay, to keep their Wine and other Liquors in; this Salt, being only the Sea-ſalt Water candied or coagulated by the Sun, will preſerve the Body of the Clay a long Time

in a State of Humidity, and ſo prevent its Hardening and Cracking, whereby the Liquor, contained under its Cover, will be in a freſh cold Condition in the hotteſt Seaſons, as I have hinted in my firſt Part, for making Pots of Clay with it to ſtop Veſſels. Again, beſides the Infection that lies in the Backs or Coolers, Tubs, or Tuns, it often extends itſelf, by tainting the Inſides of the leaden Pipes and braſs Cocks, through which the Wort is conveyed into the Working-vat, or Tun, and there will lie and do Damage to the ſucceeding Worts, if not extirpated here alſo. To do which put ſome of the ſame Bay-ſalt into the Mouth of the leaden Pipe, and pour ſcalding Water on the ſame, and let it lie and ſoak ſome Time, and you will find it effectually eradicate all Damage out of the ſame. Others will wet the Bottom and Sides of Tuns, and ſtrew the Bay-ſalt all about to it, and let it lie till next Brewing and ſoak.

CHAP. V.

Of Working or Fermenting Malt-Liquors.

IN my firſt Part, I think, I have ſufficiently detected the Male-practice of beating or thwacking the Yeaſt into Malt-drinks: But as this vile Practice has got too much Footing at this Time in the World, to be ſoon exploded, I have thought it neceſſary to reſume this Subject, and to ſay, that all violent Fermentations are unnatural to Malt-liquors; becauſe, by any furious Workings, the ſharp earthy Particles are irritated and brought into Agitation, which ſhould by no Means be ſtirred up, by Reaſon they ſpend and deſtroy the pure, fine, ſweet Spirits, and conſequently cauſe the Beer or Ale to become ſtale or vapid the ſooner. But many are ſo far from thinking this an Extream, that they promote it with all their Power, and

and force and beat the Yeaſt into the Body of the Drink for a conſiderable Time together, with repeated Mixtures; which, as I have already obſerved, is generally done out of a wicked avaricious End, to make ſix or ſeven Buſhels of Malt go as far as eight or nine; and therefore it is a great Pity there is not a Penalty inflicted by Law on this Practice, as well as there is for uſing Moloſſes, in a Brew-houſe. For, if the Truth was known, I believe the greateſt Evil is on the Side of this deſtructive modiſh extraordinary Incorporation of the Yeaſt with the Beer, and all (in my Opinion) for the Sake of thus rapaciouſly impregnating the Salt and Sulphur (two fiery Qualities) with the Liquor, that it may attack the Brain with its volatile Potency, and ſo impoſe a Credulity on the ignorant Man, that it is the pure Vertue and Strength of the Malt; and thereby it has induced many a poor Man, that works hard for his Shilling, or eighteen Pence a Day, to return the following one, for a Hair of the ſame Dog, to the Impoveriſhment of his neceſſitous Family, as I have ſeen it often done in the Country; and, as my Diſcourſe has had ſome Effect this Way, I hope my Pen will have a great deal more, towards the Suppreſſion of an Evil, utterly unknown to our prudent Forefathers, but thoroughly pernicious to many in our Time. For it is plain, that this ill forceable Uſage in Malt-liquors, by beating the Yeaſt into them, clogs and detriments the fine penetrating Particles; ſo that, in this Sort of Fermentation, the groſs excrementitious Matter cannot ſeparate from the finer Parts, by which Means it will retain a ſtrong, groſs fulſome Sweetneſs; which, inſtead of being avoided as a very great Enemy to the Health of Man, many of the vulgar People admire, and count it good and nouriſhing; when, in Truth, ſuch Liquor fails not to fur, foul, and obſtruct the Stomach and Paſſages, ſending back dark, dulling Fumes, and Vapours into the Head, and alſo generates an hard ſabulous Matter in People ſubject to the

the Stone and Gravel; therefore let both Men and Women refrain ſuch Malt-Liquors, if they have any Reſpect to their own and Childrens Health.

It is the Advice of an eminent Perſon in Knowledge and Practice this Way, that the lighteſt Fermentation, or Working of Ales or Beers, is the moſt conducive Way to Health; and that all heavy Fermentations are heterogeneous and unnatural to the Drink and Body of Man: For tho' the common Way is to tun Drink, when it begins to fall or ferment more gently; yet then it will come under a freſh Fermentation in the Barrel, that oftentimes cauſes it to work again, as fierce as ever, which is apt to make it fret and ſpend itſelf; for long or fierce Working makes all Drink grow ſharp and ſtale, ſooner than when the Fermentation is moderate and regular: It will, indeed, in ſuch Caſe become fine ſomewhat ſooner; becauſe the volatile Spirit, or ſweet Body, is waſted, or rather turned into Sharpneſs by too long and fierce Working: Therefore, thoſe, that have a Mind to avoid theſe Inconveniences, ought to tun or put up their Drink *young*, as the Brewers call it; that is, before it hath fermented too much, *viz.* ſo ſoon as the Drink works, it ought to be put into the Veſſels, and you need not doubt but it will work ſufficiently. Nay, this Gentleman carries his Opinion further, and ſays, when your Wort is thoroughly cold, mix your Yeaſt well with it, and put it preſently into the Veſſel, and it will do extraordinary well in warm Weather; and if in cold, Allowance muſt be made accordingly, by putting the Yeaſt into it Blood-warm. But how contrary is this healthful Way to the Practice of many who load their Ales in particular, with Quantities of ſaline, ſulphureous Yeaſt; and, that their Drink may have enough of it, they ſometimes make Additions of freſh Parcels in the Time of Fermentation. I once happened to be in a common Brew-houſe, and ſaw a ſquare Tun with Drink in it under a violent Fermentation, which

induced me to aſk the Man how long it had been there: He told me from *Friday* to *Tueſday*; and that latterly he had been obliged to beat the Yeaſt in it every two Hours to keep it down. At another's I ſaw ſeveral ſquare Tuns that were about four and a half, or five Feet deep, that were ſo built, as to admit of looſe Frames of Boards faſtened on all Sides into them, to allow for the great Riſings of their Heads of Yeaſt, before they beat or whiſk'd them in, which would be elevated ſometimes ſeveral Feet higher than the fixed Tun. Here was Adulteration with a Witneſs; here the fine Spirits of the Wort were entangled, impriſoned, and choaked, that ſhould have been cheriſhed, nouriſhed, and digeſted, with all the Moderation and Freedom poſſible, and in their Room the hot, ſalt, Brimſtone Spirits of the Yeaſt ſubſtituted and made predominant, to a horrid Degree of Degeneracy indeed. But, according to the Proverb, *One Man's Miſtake is another's Gain.*— Remarks: ——— I cannot ſay this Perſon is intirely right in adviſing to tun the Drink ſo young, as when it firſt begins to work (unleſs it be Small-Beer); but when the Ale or Beer has been worked as cool as poſſible, to let it have a Digeſtion firſt in the Tub or Tun; and when it is arrived to a fine, curled, white Head, then to put it up as ſoon as can be done, is a good Way; becauſe, if it does not thus ferment firſt in the Tun, the Coldneſs of the Caſk and Cellar, in Winter, would be apt to check and hinder it doing ſo in the Barrel. But, as he was a Phyſician, he directs this early Barrelling up the Drink, to be the healthieſt Way of all others, and very likely it may be ſo. But be ſure never to fill up the Veſſel again with what has worked out.

CHAP.

CHAP. VI.

Of Recovering prick'd, ſtale, and damaged Butt and other Malt-Drinks.

I WAS told by a credible Perſon, who was formerly concerned with a great Brewer in *Weſtminſter*, that he made a Trial to recover ſome ſtale prick'd Butt-Beer, that was return'd by one of his Cuſtomers, and began after this Manner: Firſt, he ran off a Piece of ſtrong Wort; then he put ſome freſh Malt on the Goods, and over that the damaged Beer; that he let ſtand ſome Time on the Goods and Malt: But, inſtead of bettering it, it came off a Small-Beer to his great Surprize; for, as he told the Story, the Rich robb'd the Poor; becauſe the Goods abſorb'd the ſtrongeſt Part of the Drink, and emitted only the ſmaller Part, as white Loaves in an Oven, when mix'd with the brown Sort, will take from them, but the Brown not from the White.

A Second Caſe.

ANOTHER Perſon, who was a Victualler in the Country, and brewed his own Drink, I perſonally knew, that acted in ſuch an Affair about four Years ago; but after a different Manner. He firſt boiled his Water, and put it over four Buſhels of Malt, by a Hand-bowl at a Time, as uſual; and ſo ſoon as a ſmall Quantity of the firſt Wort had run off juſt to take away the looſe Flour of the Malt, he put over three Hand-bowls full of the damaged Beer cold, and when it was all diſcharged, he put over two Hand-bowls full of boiling Water, that alſo ran off without ſtopping the Cock at all; and ſo on, a Parcel of the Stale-Beer, and another of hot Water, till all the Strength of the Malt was thus waſhed out: And thus he ſerved another four Buſhels of

Malt till all his damaged prick'd Stale-Beer was cur'd, and brought again into a mild pure State by Fermentation, as at other Times. And is an excellent approved Way.

Remarks on the above-written Caſes.

In theſe two Caſes the ſmall Brewer appears to be the greateſt Artiſt; becauſe he improved his Drink, when the other was ſpoiled by Miſmanagement; for it is well known, that ſeveral ſpungy Bodies are, by their Make and Textures, proper for ſtraining or refining Liquors; and amongſt others, a Body of Malt, confined in a Tun or Tub, will anſwer one ſuch End and Purpoſe, as is apparent by returning and putting over ſeveral Hand-bowls full of the firſt Running of the Malt, which is commonly thick, in order to receive it back again thin and clear; ſo alſo will a flannel Bag, faſtened about a Hoop, diſcharge foul Malt-Liquors as tranſparent almoſt as Sack, and which are uſed in all great Brew-houſes, for ſtraining the Dregs and Settlements left in the Backs or Coolers after the Worts are run off.

In the great Brewer's Operation I conceive he committed theſe Miſtakes: Firſt, by the Heat of the Goods, and the Beers lying amongſt them an Hour or more, the agitating Parts of the Yeaſt contained in them were ſtirred up, and brought into a ſmall Fermentation that diſordered the whole Body of the Malt: The ſtale Quality alſo of the Beer, I ſuppoſe, in ſome Degree might conſtringe and lock up the Pores of the Malt with its groſs and ſharp Properties, which cauſed it to emit a thinner Body than it received: Whereas all ſuch Drink, put over the Goods, ſhould be directly run off with an open, ſmall, continual Stream; that the Beer might have leſs Power to ſtay, aſtringe, and ferment the Goods, and thereby better prevent the Retention that their hollow Grains naturally make of the groſs Part of any Liquor.

Secondly,

Secondly, Here was an Omiſſion of pouring on ſcalding Water after the Stale Drink was run off, in order to waſh away the glutinous, groſs Parts that the Beer had left on the Goods, which was to have prepared it for the Reception of the next Lading over more Stale-Beer; that the ſmall Brewer very judiciouſly did, and by his alternate Additions of cold Stale-Beer, and ſcalding Water, he each Time kept his Goods in right Order, ſo as to prevent their being clogg'd with the heavy thick Parts of the Beer; and thus recovered his damaged Drink. But then, in this Caſe, I muſt remark, that the ſmall Brewer had the Advantage of the great one, in his Brewing of only four or eight Buſhels of Malt; for here he could put over the ſeveral Parcels of Stale-Beer and Water at Pleaſure, which the great one could not ſo well, by Reaſon of his large Copper, Maſh-Tun, and limited Times of Brewing; for, in this Affair, there is a great deal of Leiſure required, to give Time to the Stale-Beer and Water to run off in a ſmall Stream, that the Liquors may have the more Time to bring away with them the Goodneſs and Vertue of the Goods; otherways the damaged Beer cannot have a perfect Cure. And, if there is a Quantity of ſuch Drink to be cured, it may be done by repeating the Brewings till all is over. But here may an Objection ariſe, that ſuch Drink may be thorough clear and fine; and that there is no Yeaſt nor Foulneſs to cauſe a Fermentation and clog the Goods. To this I anſwer, that all Drinks, that have paſſed a Fermentation and Digeſtion by Yeaſt, are tinctured and incorporated with it; and tho' the Drink is aged, yet will the Effects of the Yeaſt remain in its Body in ſome Degree, and cauſe ſuch a Fermentation, as may be perceived by the thick Froth of Malt-Liquors, when only warmed over the Fire for preſent Drinking. But admit there was not the leaſt Yeaſt in the Drink, yet ſuch ſtrong Malt-Liquor has a much groſſer Body, tho' ever ſo fine, than Wa-

ter; and which conſequently will hinder it a free Percolation through the ſpungy cloſe Grains, that like a Sieve will keep back the fizy Part of the Beer, and tranſmit a thinner Liquor, as it happened in the great Brewer's Caſe.

A Third Way.

TAKE three Pounds of Hops that have been boiled in a firſt Wort only Half an Hour; and, as ſoon as they are cold, put them into a Hogſhead of prick'd or ſtale damaged Beer or Ale. Then take two Pounds of pure, ſoft, fat Chalk; break it ſmall, and put it likewiſe into the Caſk; and, if the Drink is not too far gone, it will fetch it again into a ſmooth, mellow, fine Condition.

A Fourth Way

IS done by mixing new Drink with the old; but in this there is required a particular Management; for, if too much of the ſtale prick'd Drink is incorporated with the new, it will not anſwer your Expectation; therefore obſerve to order this in a due Proportion; let there be one Gallon of ſuch Stale-Beer mix'd with three Gallons of new at leaſt, that the latter may have the greater Power; for it is by ſuch ſuperior Force, that the acid ſharp Qualities of the Stale are overcome and reduced into the ſmoother Nature of the New, and thus it will bring the whole Body of the Mixture under a new Fermentation, that will both clear, fine, and ſoften it: An Inſtance of which I knew done in a Kilderkin that had about ſix Gallons of Stale hard Beer a little prick'd. To this was put ten Gallons of New that work'd it well, and at ſix Weeks End, when the Caſk was tapp'd, the Drink proved very clear and good.

CHAP.

CHAP. VII.

The Receipt for Brewing Dorcheſter-Beer.

BOIL the Water and let it ſtand, till you can ſee your Face in it; then put your Malt in by Degrees, and ſtir it; let it ſtand two Hours; then leak on your Complement: Boil the Wort and Hops thirty Minutes; cool it as ſoon as poſſible, ſtirring it that the Bottoms may be mingled; then ſet it in the Guile-Tun, till it gathers a Head, which muſt be ſkimmed off; then put in the Yeaſt, and work it till the Head fall; then tun it, keeping the Caſk filling up ſo long as it will work.

Remarks on the Particulars of this Receipt.

THIS Receipt came to my Hands from a Phyſician, who has a Name for being curious in Malt-Liquors: However, I ſhall make my Remarks on its Particulars, for the better Underſtanding of the Nature of the Ingredients, and the ſeveral Methods here preſcribed for their Uſes. And firſt, I am informed, that at *Dorcheſter* they lie on a Chalk, which may afford a good or bad Water. If it is ſoft, and it will eaſily lather, it then is excellent for this Uſe; but, if it is hard, creeky, and curdling, it is as bad; for Experience has proved, that aſtringent or binding Waters are not agreeable, notwithſtanding the common Uſe they are put to in Brewing Malt-Drinks; becauſe their hard Qualities will ſtill remain in the Beer or Ale, and affect the human Body accordingly: For tho' it has paſſed ſeveral Digeſtions in Brewing; yet will not the mineral Nature of ſuch Water be totally deſtroyed, as is evident in the Taſte of Beers and Ales tinged by them, that will ſtill communicate the bad Properties of ſuch Waters to the Palate and Body, after having lain many Months in the Barrel: They

alſo naturally give a ſharper Taſte, and induce Staleneſs in Drink much ſooner than the ſofter Sorts; and if there are any unhealthy Qualities in them, or in the Malt, Hops, or Yeaſt, they are the ſooner and faſter fixed in the Body, as their aſtringent binding Properties have more or leſs Power.

It ſays that the Water is boiled.—It is true, according to the old Way among the private Brewers, this Method is followed: But by the more intelligible Sort, it is not; but only ſo much heated as to be ready to boil, or at moſt juſt broke into Boiling; for the longer it boils, the weaker it is, and the more unfit for Brewing; becauſe the Spirits of the Water would evaporate away in the Steam, which ought as much as poſſible to be prevented; and therefore, in great Brew-houſes at *London*, they are right in this Article of not boiling their firſt Water or Liquor to the Expence of its Spirits, which are truly worthy of Conſervation, as they tend to the Preſervation of the Drink, and giving it an agreeable briſk Flavour to the laſt.

Letting it ſtand till you can ſee your Face in it. —— Is what I muſt own is generally practiſed throughout the Country, as an Indication that the Water is in a true Temper to receive the Malt; but in this alſo I cannot commend the Country Method; for, if the Water did not ſpend itſelf in the Copper by boiling, it will now in the Maſh-Tub, and there be deprived of its Natural Spirits in Steam, that here have an Evaporation for a Quarter or more of an Hour: But to be more particular in this Point, I cannot think but this Invention was firſt contrived to ſupply the Ignorance of the Brewer, who indeed is by this Means under leſs Hazard of committing a Miſtake, than if he was to do as the *London* Brewer does; who, inſtead of ſtaying till the Water cools in the Copper, lets in a Parcel of cold Water directly; and thereby brings all his Liquor into a Temper at once, and ſo prevents the Miſchief that boiling the Water

Water would do. But this is a Piece of Skill that every one is not Maſter of; and to ſuch the old Way is preferable.

THEN put your Malt in by Degrees, and ſtir it.—This has been ſuch a random Direction in Receipts of this Kind, that I never met with any Brewer in my Life, either great or ſmall, that I ever heard diſpute about this Matter, or ever miſtruſt there was any thing in it beyond common Management: But I am ſure there is conſiderable, as I have conſtantly found by Experience, tho' their Mouths are frequently full of diſallowing what is generally called a *Pudding-Conſiſtence* in the Malt; and that ſuch a Misfortune is only brought to paſs by one particular Way, *viz.* by ſcalding the Malt, which I own may be done: But I can now aſſure them, it may be done another Way, and that is, by maſhing the Malt too long; and then the Brewing is never truly natural where the Water is put over by the Hand-bowl, or what is called *Lading over*; by reaſon the Malt then will lie in ſo heavy and cloſe a Body, that the hot Water can't have ſo quick, free, and eaſy a Circulation about all the Sides and Parts of the Malt, as when it lies looſer: And therefore, when the Malt is put into the Water, it ſhould run but ſlowly, and be ſtirr'd as little as poſſible; I mean no more than needs muſt to keep it from balling; and then the Water will have free Acceſs to all the light Body of the Malt. It is true, this moſt ſerviceable Nicety does not affect the great Brewer in his large Quantities of Malt, or where the Water aſcends through a falſe Bottom, and the great Oars are uſed ſeveral Times in a Brewing; becauſe they don't here lade over by Degrees, but maſh all at once. However, every one to their Conveniency and Mind; the Lading over by Degrees pleaſes me beſt.

LETTING it ſtand two Hours. — This is ſoon ſaid and writ; but there is more in the Matter than at firſt ſeems: The letting it ſtand two Hours, is a very

very good Way to give the Water Time to enter the Pores of the broken Malt, and extract its Vertue: In this Reſpect I approve the Country's Method beyond that of the Brewer, who generally lets it ſtand only one Hour; but I like his Way beſt, that caps the Malt or Goods: That is, ſo ſoon as the firſt Maſh is done, he puts ſome freſh Malt ſpread over it to keep the Spirits in, and prevent their Eſcape in Steam, which is an excellent Way to give the Drink the true Flavour of the Malt; that it will be ſure to do, if it thus lies two or more Hours under Cover.

Leaking over.—Is what may be called putting over the Malt, at Times, many Hand-bowls of Water, that it may run gradually off, and waſh away the Flour of the Malt by a ſlow Degree, that the Vertue of the Malt may be leiſurely extracted; which is more natural, and much better, than by haſty Proceedings; but this I have ſaid enough to elſewhere.

Boil the Wort and Hops thirty Minutes.——— This Article I would, if it was in my Power, reform in the firſt Part, but not in the latter. I am very ſenſible that the firſt Publication of the Hops true Nature, has done a great deal of Service in the World towards the Enjoyment of more wholeſome Malt-Liquors than heretofore this Nation uſually enjoyed; and I would contribute the beſt of my Power, that the Wort may have alſo its Cure as well as the Hop: And therefore I adviſe, that the Wort, inſtead of being boiled Half an Hour, may be boiled briſkly till it is broke enough; which may eaſily be done, if it boils but Half an Hour before the Hops are put in, and then boil it longer with the Hops in; or put in the Hops at the firſt Boiling of the Wort in one or two Bags, and, after Half an Hour, take them out, and boil the Wort on by itſelf: Thus both the one and the other will have their due Cure: For, in my Opinion, it ought to be eſtabliſhed as a general Rule, that no freſh Hop ought to be boiled above thirty Minutes in Wort, and the Wort

boiled leſs than till it breaks into large Particles; for, if they are, I am ſure the Liquor muſt ſuffer in ſome Degree; firſt, by the naſty, earthy, groſs Parts of the Hops; and, ſecondly, by the Wort's being raw, and not thoroughly digeſted.

Cool it as ſoon as poſſible. — This anſwers Nature's End in the beſt Manner; for Wort can't be too cold to work, if it can be made to work at all: By this Temper it is, that the Wort is prevented fretting, and the fine Spirits of the Malt diſſipated; all violent Fermentations being an Enemy to Nature, and are often the Cauſe of ſudden Staleneſs and Sourneſs; for which Reaſon Brewers dare not take the ſame Liberty in working of keeping Beers, as they do in the common Brown and Pale-Ales that are to be drunk directly; becauſe it would be in Effect forcing of Nature beyond her genuine Motion, which is the beſt Dictator, and proves herſelf moſt improved, when ſhe is moſt gradually managed and aſſiſted; and therefore the Art is ſo to work all Malt-Liquors, that the Salt and Sulphur, with which they abound, be kept in a due Regularity.

Stirring it that the Bottoms may be mingled.— This is very particular indeed, and contrary to the Practice of all *London* and *Country* Brewers that I ever knew: For in *London* the great Brewer takes great Care to leave the Dregs and Sediments behind in the long fixed Backs, and draw off their Worts from them as fine as poſſible, as thinking ſuch groſs *Fæces* would prejudice the Drink, eſpecially the keeping Sorts: Indeed, it muſt be allow'd that foul Sediments, as they ſubſide the Thickneſs of one, two or three Inches in a Butt, will become a Feed or Subſiſtence to the Beer for ſome Time; but then let it be conſidered, that, by putting all the Sediments into the Caſk along with the Beer, the worſt Part of all that is loaded with the groſs earthy Salts and Sulphur of the Malt, Hops, and Yeaſt, is here reſerved in the Beer to the laſt; which harſh, earthy Qualities, being very unwhole-

unwholeſome, will not fail to communicate their rough Properties to the Drink, and on Change of Weather be very apt to diſturb the Body of the Beer, and bring it under a Foulneſs and Staleneſs ſooner than ordinary; for, as the Feed is, ſuch will be the Nature of the Malt-Liquor. The greateſt Artiſts, that have had a regular Learning in the Art of Brewing, allow that Drink, though it be ever ſo fine, put into the Guile-Tun out of the Coolers, will carry with it into the Caſk ſuch a Share of Matter, as will become ſufficient *Fæces* for feeding the Beer ſome Time, if there is Malt enough given it: But where that is doubted, and that the Drink may be further improved, any of the Compoſitions, or rather the Balls, mentioned in my firſt Part, may be uſed, which I have experienced to be excellent for this Purpoſe, and are of a much more preſerving, fining, and wholeſome Nature, than the foul natural Sediments of the Drink.

Then ſet it into the Guile-Tun till it gathers a Head, which muſt be ſkimm'd off.—It is very likely a Head will ariſe in the Guile-Tun, where all the *Fæces* are put in with the Wort; becauſe the Salt and Sulphur of the foul Dregs will give it a Sort of ſmall Fermentation, and cauſe a Cream to appear in a Head, which he ſays is beſt ſkimm'd off, and ſo do I; for it is a Sort of Excrement that the Wort diſcharges of itſelf; and, the leſs there is of ſuch left in the Drink, the better it is. But I never like to ſee Wort have a Cream on it before the Yeaſt is put in; for oftentimes this is a Preſage of the Fox.

Then put in the Yeaſt, and work it till the Head fall.——This muſt be done without all Doubt, and ſhould be work'd as cool as poſſible; and when it has got to a good Head, to beat the Yeaſt in only once, and cleanſe it into the Veſſel, is the beſt Way of all others for keeping Beers. By this the Drink will have its Body fully opened with a due Fermentation, that is perfectly neceſſary to make it fine, and drink

clean

clean and light. I knew three petty Brewers of three Minds in this Reſpect. One ſaid, Draw off the Drink by a Cock placed ſix Inches above the Bottom of the Tun or Tub, that the Sediments may be left behind. A ſecond ſaid, Do that and ſkim off all the Yeaſt beſides. A third ſaid, Put Beer, Yeaſt, and Sediments all into a Barrel. Now, let us examine which of the three was moſt right. The firſt had, ſurely, a true Notion of the Matter; becauſe it is theſe *Fæces*, that would afterwards cauſe a violent Fermentation in the Barrel, and bring no Acidity and Staleneſs in keeping Drinks: And to hinder their incorporating with the Beer, is the Way to have fine Drink. The ſecond, that was for taking off Top and Bottom, declared himſelf more in the right than any of the three; for that there would be Yeaſt enough left in the Drink to cauſe a Fermentation in the Barrel, notwithſtanding the Top and Bottom are taken off before. But the third, I think, wholly in the wrong, that would have all put into the Caſk; for then, by Conſequence, there muſt be a violent Fermentation excited, while ſuch Drink abounds with the Salt and Sulphur of its additional Yeaſt, and Dregs of its own Body; that are two Principles of ſuch a ſharp, fiery Nature, as are eaſily put in Motion, even by the very Influence of the Weather; and which is the Cauſe that ſuch Beers are ſo frequently diſturbed on its Changes, and become ſtale, thick, and ſour in a little Time.

Then tun it, keeping the Caſk filling up, ſo long as it will work.—A very good Way, indeed, and what is conſonant to the beſt Management in Brewing; and for that Purpoſe ſome of the Drink is kept out by Way of Reſerve for this Uſe, having a thick Head of Yeaſt on it within about two or three Inches of the Top; which will greatly contribute towards keeping in the Spirits of the Drink; for I think there cannot be too much Security taken for keeping in the Spirits of the Drink, which are conſtantly upon

on the Wing, and ready to fly away upon all Occaſions; and then ſuch Drinks will ſoon become vapid, ſtale, and ſour. But there is a moſt contrary Way practiſed by ſome Publicans that I know; and that is, when the Drink has done working, and the Yeaſt duly ſettled, there will be a thick Part and a thin Part; now as to the thin Part, theſe Sort of avaricious People carefully run as clear off the Tub or Pan that it is catched in, as poſſible, and return the ſame into the Caſk, reſerving only the thick Part out: This is another horrid, naſty, unwholeſome Part of Brewing, that is worſe than what I have complained of before, of beating or thwacking the Yeaſt into working Ale or Beer; for this is the very Tincture or Quinteſſence of that poiſonous Excrement, and is ſo oppoſite to the ſound Nature of Drink, and the Health of the human Body, that in the firſt it will immediately infect the whole Caſk of Malt Liquor with its fulſome Taſte, and in the Drinker cauſe a Squeamiſhneſs or Sickneſs in the Stomach and Head for ſome Time after, and often violent Cholics. But according to the Proverb, *What the Eye never ſees, the Heart never rues*; for, were the ill Effects of ſuch Liquor truly known, I don't ſuppoſe the very neceſſitous Man would take it into his Belly, that could poſſibly ſatisfy Nature any other Way; becauſe, in very Truth, Drink thus *poiſoned*, as I may in ſome Meaſure call it, with the moſt corrupt refuſe Part of the Beer and Yeaſt, is only fitting for the Hog-Tub, or which is much better, to be thrown down the Kennel; for there it will do leaſt Harm. It once happened, as I was drinking at a Publick Houſe in a Village, among other Diſcourſe, the Brewer very frankly own'd, he always took particular Care to let the Yeaſt ſettle after it had work'd out of the Barrel; and then poured off the clear or drinky Part into his Veſſel. On this I told him ſome of the pernicious Conſequences attending ſuch Mixture. His Anſwer was, that truly he had paid Exciſe for it, and

he

he could not afford to loſe it. This was only one I accidentally found out; but I do not in the leaſt doubt, but there are Thouſands in the Nation beſides, that are guilty of this adulterous Part of Brewing; and then it is no Wonder that Cholics, Stones, Gouts, Vapours, and Conſumptions, *&c.* are ſo rife as they now are: Nay, the dead Droppings, or Leaking of the Tap, are put by ſeveral into a reſerved Caſk to digeſt and recover itſelf with Time, and then become ſaleable Drink; but this I likewiſe deteſt for its naſty, vapid, unhealthy Quality that it contracts in the open Tub, expoſed ſome Time to the Air, and other incident Corruptions, which muſt neceſſarily retain a filthy Nature, tho' confined two or three Months in a Veſſel afterwards. And therefore I am incited to take Notice of the Hardſhip, that ſuch Publican Brewers lie under of being forced to pay Exciſe for ſuch excrementitious Drink, and thereby tempted to prejudice the Health of the ignorant Drinker, for the Sake of re-imburſing themſelves of the Duty, and which, I think, ſhould be a moving Conſideration to an Officer to take Care of oppreſſing the Subject with Overcharges in Gauging, that I remember too frequently happened to me, when I was concerned in the Publick Brewery. And as I thus write in Vindication of the Subject, I would nevertheleſs be underſtood, I am likewiſe a Votary for the very ſame Juſtice on *Cæſar*'s Side, whoſe Dues are equally his Right; and therefore I ſhall here inſert the Copy of a Letter written by a common Brewer in *London*, which I found among his Papers after his Death, *viz.*

Mr. ——

THIS is to inform you, that about eighteen Years ago, I ſet up the Trade of Brewing, and thought it not amiſs to take all Advantages and Opportunities, to enrich myſelf by it, in reſpect of the Duty; but, after I had gone on in this Error, God was pleaſ-

ed,

ed, after two Years Gain this Way, to lay a great Affliction upon me in reſpect of my Health; and being brought very near to the Grave in all outward Appearance, and being under the Apprehenſion of the awful Juſtice of the Almighty, I took in Hand the Work of Examination more ſeriouſly; and calling to Mind the Sins of my Child-hood and Youth, I proceeded to thoſe of riper Years, and of my preſent Circumſtances; and tho' before I thought it no Crime, to ſave what I could of the Duty, now Conſcience tells me that it was a Sin, and a very great one; becauſe it is not rendering to *Cæſar* the Things that are *Cæſar*'s, as our Saviour taught us to do; and not doing to another, as I would he ſhould do unto me. If I were the King or Governor, I would not be willing to be defrauded of what was given me, and becomes my Right by Law, (as this to King or Queen of this Realm is); and our Saviour that ſaid, Render to *Cæſar*, hath in this taught us to be juſt to our Governors, as well as our Equals, and pay Honour to whom Honour, Fear to whom Fear, Cuſtom to whom Cuſtom, and Tribute to whom Tribute is due. Theſe Things being now ſet in a clear Light, I was brought to a Hatred of this my beloved Sin of Gain, was made to reſolve againſt it, and have kept from the Practice of it ever ſince; tho' you may be aſſured, it was as pleaſing to me, as to yourſelf, before I ſaw it to be a Sin; but, ſeeing I went on in it but two Years, I do account myſelf obliged to make Reſtitution to the Government for it to the utmoſt Farthing. I ſend this to admoniſh you to do the ſame; and tho' you may think it a hard Taſk, yet it is no more than what I put myſelf under; for there can be no true Repentance without Reſtitution, where we have Ability to do it, as you and I have: And tho' you may ſay it will amount to a great Sum, it therefore calls the more for the Payment of it; and if it comes to all you are worth, yet it is beſt to reſtore theſe ill-gotten Goods; for what can it profit

you

you or me, if we gain the whole World, and loſe our own Souls; and therefore my Advice to you is, ſeeing you cannot reaſonably expect to live much longer, to caſt up, as near as you can, all you have defrauded the Government of, all the Time you brewed, both by whole Guiles, and Parts of Guiles, in making your Length ſhort, and then making it longer with Small-Beer, and alſo by hiding and other Ways, which you know beſt; but it would have been beſt, not to have known any Thing of it in Practice. It is my Reſolution, that, when I can't follow a Trade or Calling without defrauding, I will lay it down. I think you have laid it down as to yourſelf, but that is nothing, unleſs you make Reſtitution for all your unlawful Gain; and warn your Sons that they do not the like, but immediately break off from theſe wicked Practices, which otherways will be both to you and them Gall and Bitterneſs at the laſt: And, that it may not be too late, I ſend this to you, not to do you Hurt, but Good; not to make you Poor by reſtoring, but by reſtoring to make you Rich in Faith and Heirs of the Kingdom of Heaven; which I think cannot be, while you retain the Sin or the Effects gotten by the Sin, or uphold or encourage your Sons in going on in the ſame Manner; for which God has promiſed to viſit the Sins of the Fathers upon the Children to the Third or Fourth Generation, and eſpecially ſuch Children as go on in their Fathers Sins, as yours do in the Sin of Covetouſneſs in the higheſt Degree; but if you will not own it to be a Sin, I tell you, you muſt own it now, or you will be forced to own it when it will be too late to repent, or make Reſtitutution for the Wrong you have done in it. I preach no other Doctrine to you, than what I take myſelf; and having done what I thought was my Duty, and what I was bound to do, I leave the Event to him that diſpoſes of all Things, But withal I deſire you to do what you can to reſtrain all others you know

have been, or are in this horrid Sin of Fraud and Injuſtice.

CHAP. VIII.

A Receipt for Brewing Drink after the Shropſhire *Method.*

WITH regard to the Ingredients or Materials of Brewing good Beer and Ale, three Things ought principally to be taken Care of, *viz.* good Hops, good Malt, and good Water. As to Hops, provided they are well pick'd and dried, the *Kentiſh* Hop is eſteemed for Strength, to equal, if not exceed any of our *Engliſh* Growth, *&c.*

THE Water to be made Uſe of, if it can be had, is beſt that comes off a Marl or Chalky Bottom, or River Water after a Flood, reſerved in Tubs with Taps two Inches from the Bottom to draw it off clear from the Sediments; but in ſome Places as there is a Neceſſity, ſo there are Ways and Means of meliorating the Water by throwing Chalk into, or ramming the Bottoms of Ponds and Wells with clayey Marl, *&c.*

THAT Malt is eſteemed beſt, and I think deſervedly too, which is made after the *Nottingham*, *Darby*, or *Dorcheſter* Way, which for Fineneſs of Colour, Strength, and Taſte, exceeds all others. Having obtained theſe three Ingredients in Perfection, the next Step towards having good Drink, is to take Care of the Manner of Brewing, which is various and different according to the Uſage of different Places: But one Way has been univerſally approved of in Places famous for good Drink. The Way is this: Having boiled your Water very well with a little Bran thrown into the Copper in maſhing up, put about three Pecks or a Buſhel of your ground Malt into a Tub; then pour upon it boiling hot Water; then ſtir it till all the Malt is wet;

wet; then lift it into your Maſh-Tun, and ſo proceed till your whole Quantity of Malt is wetted; then let it ſtand three or four Hours; when you draw off, let it run from the Tap in a ſmall Stream, ſprinkling the Top of your Maſh once in three or four Minutes with hot Water. By this Means you will not diſturb the Sediment, and may make your Ale as ſtrong or as ſmall as you pleaſe. In boiling obſerve the Breaking, *&c.*

From the Coolers to the Working-vat, from thence to the Veſſel, *&c.*

Remarks on the before written Receipt:

This Gentleman, it is plain, intended out of an honeſt and generous Diſpoſition to benefit the World, by letting them know his Way of Brewing as it is practiſed by himſelf, and ſeveral others; and I muſt own I have drunk Ale and Beer at his Houſe free of any other Fault but two; and they were, the Liquor's not being fine in the Glaſs, nor clear of that naſty, bitteriſh, earthy Taſte, that all Hops give Drink in which they are boiled too long, But, to be more particular, I will examine his Receipt from the Beginning, where he ſays, that good Hops are neceſſary; and that the *Kentiſh* Hop is equal to, if not exceeds all others. This, I own, is my Opinion; but, why a peculiar Commendation is due to the *Kentiſh* Hop, is to be accounted for: It is my Notion, that they have no more Advantage in their Soil, than thoſe of *Hertfordſhire*, and ſome other Countries; becauſe, in both, as I remember, there are Sands, Chalks, Clays, and Loams. Their Situation almoſt alike hilly, or what may be called *Chiltern* Countries; a Title that diſtinguiſheth them from the Vale Countries; ſo that I can't think *Kent* has any Preference on that Account: But I muſt be an Advocate for it on two others; and they are, firſt, That, as *Kent* lies Southward from *London*, it certainly has a

greater Influence of the Sun's Rays than *Hertfordſhire*, and ſome others that lie more Northwards, which undoubtedly is a great Benefit to the Growth and Spirit of the Hop, as ripening them ſooner and better, than thoſe that have not ſuch a happy Aſpect, and are thereby delivered more from the Power of the cold Dews and Froſts that happen in the Beginning of *September*, to others which are gathered about that Time, and is prejudicial to them and many other Vegetables in ſome Degree by the Chill it gives them; which is the Reaſon that ſome of the Curious gather their golden Pippins before they are thorough ripe, as rather having them a little ſhriveled, with a fine Spirit in them, than full mature, and damaged by the Cold; for the hotter the Weather is, when they are ripe and gathered, the better it is for the Hop; and by the ſame Rule the *Southern* Cyder is ſtronger than any other in *England*; becauſe the Fruit has a favourable Aſſiſtance from the Sun in this Southern Situation as well as the Root, that is obliged here to run ſhallow on the Marble Rocks, which indues the Fruit with a ſtronger Spirit than others are. Secondly, The Hop in this County of *Kent* may probably receive a ſtronger Spirit than others from the Effluvia of the warmer Air, that becomes more potent by the exhaled Vapours of the great Quantity of Salt Water, that I am apt to believe encircles near two Thirds of this County; and ſo I take it to be with what they call the *Sea Wormwood*, that grows on the Rocks about *Barnſtable* in *Devonſhire*; which is very valuable for its Flavour and Strength beyond the common Sort that grows on ſome of our waſte Grounds; and that by reaſon of its ſhallow Root, the Daſhing of the Salt Waves, and the thin warm Air or Vapour that ariſes from the Water, that is abundantly more ſubtile and finer than the groſs Land Air; which undoubtedly impregnates this Vegetable with an excellent Spirit; as the *Kentiſh* Hop may

may alſo receive for ſome of the ſame Reaſons. Yet ſome ſay the *Worceſterſhire* Hop excels.

He comes next to the Water, and praiſes a Chalk or Marl Bottom, or River Water after a Flood. To this I anſwer, he is right as to the firſt two; but as to his taking Water out of a River, preſently after a Flood, and putting it into Tubs to ſettle before it can be uſed, I can't be of his Opinion; becauſe, while ſuch Water is making its Sediments in open Tubs, the Spirit of it dies in ſome Degree, and you loſe the beſt Quality of the Water, which all Brewers in a ſingular Manner ought to employ their greateſt Care to preſerve; and that ſuch Water has a powerful Vital Virtue, is evidenced (as I have in another Place obſerved) from that of the *Thames*, that is ſaid to ſtink two or three Times in an *Eaſt-India* Voyage, and at laſt, upon Opening the Bung, will ſend forth a fine Spirit of an inflammable Nature: And therefore where it can be had out of a River pure and clear, I think it far preferable to uſe it directly, than to obtain it by the Tap out of Tubs, unleſs mere Neceſſity is the ſole Reaſon for the Contrary.

Malt is the other Article; and which he very juſtly allows to be the beſt of all others, when it comes neareſt to the *Nottingham*, *Darby*, and *Dorcheſter* Sorts, which are dried with Coak; and therefore are excellent for their Strength, pale Colour, and Flavour; becauſe the Kernels by this Sort of Fire are free from the unwholeſome and unpleaſant Quality of the Smoke, which all other Fuel in ſome Degree or other taints the Malt with; and not only hurts it in theſe two Evils, but alſo with their more irregular Heats that all Fires are ſubject to, except Cinder and *Welch* Coal, whereby the Malt is better made in ſome Parts of its Body than others; now, the truer it is dried, the more and finer Drink it will make; and then ſuch Malt is further improved in its Strength and Colour by the ſulphureous pale Effluvia, ariſing out of the

Coak or Culm: But this Effect in the latter is apt to be too ſtrong and unpleaſant.

He alſo adds, that boiling Water is to be poured upon three Pecks or a Buſhel of Malt, firſt in a Tub, and after it is ſtirred, to be all put into the Vat, and ſo proceed doing the like by another Buſhel, till all is put into the Maſh-Tun. This is the Reverſe of what I have taught in ſeveral of my Methods of Brewing; and it is my Opinion, that thoſe who ſo univerſally (as this Gentleman terms it) follow his Receipt, it is becauſe they know no better Way; for if he knew the *Nottingham*, *Darby*, and *Dorcheſter* Rules of Brewing, as well as he does the Nature of their Malt, he would I believe alter his Mind and Faſhion; for in thoſe Places they are Strangers to ſuch a Hodge-podge Way, as being their chief Endeavour to keep the Malt, Goods, and Grains as light as poſſible in the Maſh Vat, or Tun, that the Water may have free Acceſs to, and into all the Parts of the broken Malt, the better to extract its Quinteſſence and Spirit; and, that they may do it gradually, they take ſpecial Care not to let the Water be boiling hot, when the Malt firſt unites with it, leſt its fiery Violence ſcald, lock up, and ſtop the Pores of the Malt, make it clot and cake together, and the moſt flouery Parts of the Malt run whitiſh, glewy, and ſizy, like Paſte; for, when it ſo happens, their Hops ceaſe from obtaining good Drink that Brewing; becauſe then the Malt will never mix kindly, nor give out its Strength to the Water. This is alſo proved in ſcalding of a Hog; where the Judgment of the Butcher is tried in taking his Water in ſuch a Degree of Heat, as will cauſe the Hair to come off eaſily; but, if he lets it boil, it will rather ſet and faſten it on: Nay, the *Nottingham* Brewer is ſo tender in this Article, that after he has put a Buſhel of dry Malt, over five that have been juſt maſh'd to keep the Spirit in, tho' it has lain thus two or three Hours,

yet he dares not let his Water be boiling hot, that he firſt lades over, leſt it ſcald and ſpoil that Buſhel; but takes Care that it want ſeveral Degrees of that Heat: And, when it is thus wetted, he then boldly puts over his Jets or Bowlfuls of boiling Water; for then all is out of the Power of this Sort of Damage. It is true this Mixing of the Malt with boiling Water firſt in a Tub, will prevent its Balling, or Gathering together in Heaps, ſo that the Water can come to all its Parts (which is the chief Reaſon, I ſuppoſe, that this Way was firſt invented;) but then it muſt conſequently bring all into what I call a *Pudding-Conſiſtence*, that will cauſe the Malt to lie ſo cloſe together, that the boiling Water afterwards can't have a free Circulation to all its Parts; nor can its Goodneſs then be got out ſo regularly and eaſily, as if it lay in a looſer Maſs; and therefore to ſupply this Misfortune of Balling, I put in the Malt very leiſurely upon the Water in the Maſh-Tub, and ſtir it, as I have already directed in the Chapter of *Brewing Wheat-Malt*, where the reſt of his Receipt is fully anſwered.

A Receipt for Brewing a Drink according to a Method uſed in Philadelphia *in* Penſilvania.

TAKE five Pounds of Moloſſes, Half a Pint of Yeaſt, and a Spoonful of powdered Race Ginger: Put theſe Ingredients into your Veſſel, and pour on them two Gallons of ſcalding hot, ſoft, and clear Water; then ſhake them thoroughly well together, till it ferments, and add thirteen Gallons of the ſame Water cold, to fill up your Caſk; let the Liquor ferment about twelve Hours, then bottle it off with a Raiſin or two in each Bottle.

THIS was given me by a Perſon, who ſays that a pretty wholeſome cheap Drink, for quick Spending, may be made after the Form of this Receipt: But, as

I never yet tried it, I leave the Proof to thoſe that may think fit to make Uſe of it.

Another from South-Carolina.

I LATELY had an Information from a Perſon who lived ſix Years at *South-Carolina*, and belonged to one of his Majeſty's Ships of War there, that they have no Malt-Liquor, but what comes from *London* or *Briſtol* at Ten-pence *per* Bottle. As for their common Drink, a Table-Beer, he ſays it is very good, but apt to purge thoſe that are not accuſtomed to it upon their firſt Drinking it; and if very new, as they are forced by Neceſſity ſometimes to drink it ſo, it makes them very ſick: It is made in the following Manner.—They make Uſe of no Malt or Hops, but take a ſufficient Quantity of the young Pine-Tops (which they have growing in great Plenty in the Woods there, and from which Trees is procured the Turpentine they deal ſo largely in) and boil them in Water for about an Hour, or till the outward Skin or Rind peels or ſlips off; then they ſtrain the Liquor; to which they put a ſufficient Quantity of Treacle (the Quantities he could not inform me) or Moloſſes, which they boil for ſome Time; then cool it a little, and put it up in their Veſſels, which they call *Punkins*, and ſo work or ferment it, being Strangers to Yeaſt. They take ſome of their Potatoes (which are of three Sorts, the Yellow or *Brimſtone* as they call it, the Red, and Brown; there are ſome of them a Foot or more long, and are very ſweet in Taſte almoſt like to our Parſnip; but the Natives prefer the *Iriſh* Potatoe to eat with their Meat. Theſe they cut into Pieces very ſmall, and maſh them; then put them into their Drink, which works it very well, and their Sweetneſs gives the Liquor an agreeable Reliſh; for it is apt to be a little too bitter from the Pine-Tops, which are very ſtrong, but very wholeſome; tho' when they can get Spruce (which

(which is ſomewhat ſcarce, and grows among the Rocks) they prefer this Drink before that made with the Pine, both for Wholeſomeneſs and Pleaſantneſs. They preſerve the Grounds to accommodate Perſons, as we do our Yeaſt, that are brewing.

A Country Victualler's Way of Brewing.

He has two Maſhing-Tubs, one that will maſh four Buſhels and the other two; and one Copper that holds Half a Hogſhead. The Water, when boiled, is put into the biggeſt Tub, and a Pail of cold Water immediately on that: Then he puts his Malt in by a Hand-bowl full at a Time, ſtirring it all the While, and ſo on in a greater Quantity by Degrees; (for the Danger of Balling is moſtly at firſt) till at laſt he leaves Half a Buſhel of dry Malt for a Top-Cover: Thus he lets it ſtand three Hours. In the mean while another Copper of Water is directly heated, and put as before into the other Maſh Tub, for maſhing two Buſhels of Malt, which ſtands that Time. Then, after the Wort of the four Buſhels is run off, he lets that alſo of the two Buſhels ſpend away, and lades it over the Goods of the four Buſhels, the Cock running all the while, and it will make in all a Copper and half of Wort, which is boiled at twice; that is, when the firſt Copper is boiled an Hour, or till it breaks into large Flakes, then he takes Half out, and puts the remaining raw Wort to it, and boils it about Half an Hour till it is broke. Now, while the two Worts are running off, there is a Copper of Water almoſt ſcalding hot made ready, and is put over the Goods or Grains of both Tubs; where, after an Hour's Standing, the Cock is turn'd, and this ſecond Wort boiled away, that he again puts over the Grains of both Tubs to ſtand an Hour; which, when off, is put into the Copper and boiled again, and then ſerves hot as it is inſtead of the firſt Water for maſhing four Buſhels of freſh Malt;

where

where after it has lain three Hours and is ſpent off, it is boiled; but while it is in the Maſh-Tub, a Copper of Water is heated to put over the Goods or Grains that ſtands an Hour, and is then boiled for Small-Beer. And thus he brewed in all ten Buſhels of Malt as ſoon as he could, with two Pounds and a Half of Hops for the Whole.

Another,

WHOSE Copper holds about twenty Gallons, makes Half a Hogſhead of Ale off four Buſhels of Malt, thus: He juſt maſhes the firſt Copper of Water, and lets it ſtand three Hours before he draws it off, which he reſerves in a Tub with Hops; then having another Copper of boiling Water ready, he lades that over, a Handbowl-full at a Time, keeping the Cock continually running till all is off; then he boils this ſecond Wort firſt with Hops till it breaks, when he takes Half out, and puts the firſt Piece of raw Wort to the reſt, and boils away again till it breaks; then makes a Kilderkin of Small-Beer without any Hops, which when cold, he puts one Pail of cold Water to it to keep it from ſouring, and the next Day it is heated, and ſerves for the firſt Liquor towards brewing four Buſhels of freſh Malt next Day, and at laſt makes a Kilderkin of Small-Beer. By which Method he pays no extraordinary Exciſe.—While the Wort is boiling, this Brewer for ſome Time lades it up and down with a Hand-bowl, believing this Motion contributes much towards making the Wort break the ſooner.

CHAP.

CHAP. IX.

A Diſſertation on the ſeveral Parts of the Brewery.

ANOTHER, to brew four Buſhels of Pale Malt, uſeth one Pound and a Half of Hops, thus: He rubs them well between his Hands, and then cools a little Wort, in which he wets them all; then puts them into a fine Net, and boils them only twenty Minutes, but his Wort longer till it breaks; by which he enjoys a fine palatable Liquor, fit to drink at a Month's End.—Remarks on the ſame.—Firſt, He is certainly right in uſing that Quantity of Hops to four Buſhels of Malt, even for common Ale to be drunk in a little Time; becauſe, as the Pale Sort is the moſt luſcious of all others, there is required no leſs than ſo much. Secondly, And to have the pureſt ſpirituous Part of this Vegetable in a little While, he is no leſs judicious in rubbing them firſt; for by ſuch Friction they are put into a Condition of imparting their Eſſence more freely to the Wort in a little Time: Thirdly, his Method of ſoaking them firſt in cool Wort is good; for if Hops are put directly into boiling Wort, as the common Way is, you may then expect the Pores of them to be locked up and ſcalded by the aſtringent Heat of the Liquor, and thereby hindered emitting ſo much of their Vertues as is neceſſary in that Space. Fourthly, his Management in boiling the Wort longer than the Hop, and till it breaks, is a moſt ſure Way of giving a Cure to both; for you may depend on it, if Worts are under or over boiled, they are not rightly brewed. If under, then it will not work kindly in the Vat, nor fine truly in the Barrel, nor taſte pleaſant in the Glaſs. If too much, its viſcous Parts will not thoroughly

roughly break by Fermentation; for, by too long Boiling, the Body of the Wort gathers into a thicker Conſiſtence than it ought to have, and when very much boiled it is apt to fox, or become ropy in the Caſk, and thereby ſubject to the Breed of Worms while it lies on the ſame. Fifthly, This may then juſtly upbraid the old erroneous Way that ſome are guilty of, who boil all their Beers and Ales by the Hour-Glaſs or Half, or, in plainer Terms, in the Dark; for it is impoſſible for the Art of Man to adjuſt ſuch Boiling by that Rule, or any other, except the Eye; becauſe one Sort of Malt won't break ſo ſoon as another, nor will one Sort of Water admit of it ſo ſoon as another, nor will a ſlow Boiling ſo ſoon as a quicker; and the Reaſon for ſuch a wrong Method of Brewing was occaſioned two Ways: One by the general ill Cuſtom of the Times; and the other by the Difficulty that attends ſuch an Obſervation in the great Copper, where the Curb is put up, and the Top of it is four or five Feet higher than the Wort, that leaves only a narrow Vent for the Steam to aſcend out by; and then ſuch Wort, that is under or over boiled, by Conſequence can't be ſo wholeſome as that boiled to its true Criſis, by Reaſon it is not of ſo eaſy and natural Digeſtion; but, like the Extreams of under or exceſſive boiled Meats, will not fail to diſagree with the Conſtitution of the Body in a Degree; and if ſuch Brewers happen right (as undoubtedly they ſometimes do) it is more by Chance, than Cunning: But then where is the Prudence of thoſe whohave the Convenience of Buying or Brewing right Drink, and yet lay out their Money all the Year in bad Malt-Liquors, without Regard to their precious Health (the greateſt Jewel in Life) and the conſiderable Profit that may be obtained in ſaving the Exciſe? And how a Family may brew their own Drink in a little Room, and with a few Tubs, I think I have amply ſhewn in my firſt Book of the *London*

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and *Country-Brewer*, beſides many other ſerviceable Curioſities that ſince have been proved by thoſe I never ſaw or knew, and their Praiſe ſounded at the Bookſellers Shops, *&c.* for the ſame. And as I have both in that and this Book detected the horrid Practice of beating great Quantities of Yeaſt into Ales, to the great Damage of the human Body; and alſo expoſed the common but conſiderable Loſs that Thouſands fall under by Clay-Bungs, I ſhall here only enlarge a little farther on the laſt. It is true, that theſe Bungs are certainly a very great Convenience to ſome Brewers, by being ready to ſupply the Place of better with little Trouble and Coſt: But if a Perſon will but conſider the ſeveral ill Effects attending the ſame, I am of Opinion, he will no longer ſuffer ſuch a prejudicial Companion to be cloſe to his Drink. For theſe are the Words wrote in Dr. *Quincy*'s Diſpenſatory, Page 223, *viz.* " We muſt con-
" ſider that Clay is a mineral Glebe, and that the
" groſs Particles, and metallic Salts with which
" Waters paſſing through ſuch a Bottom do abound,
" are, as Dr. *Liſter* obſerved, not to be maſtered;
" that is, indigeſtible in the human Body; not only
" therefore will theſe cauſe, as he well argues, cal-
" culous Concretions in the Kidneys, Bladder, and
" Joints, and, as *Hippocrates* experienced, hard Swel-
" lings in the Spleen; but they muſt neceſſarily of-
" tentimes, by their corroſive Quality, twitch and
" irritate the ſenſible Membranes of the Stomach and
" Bowels; and thus hinder and interrupt the Digeſ-
" tion of our Food. Nay, beſides all this, when
" they come into the Blood, it is no Wonder if the
" ſmall Canals of inſenſible Perſpiration are fre-
" quently ſtopped up, and obſtructed by them; for it
" is upon this Score, that *Sanctorius* teaches us in his
" *Medicina Statica*, *Sect.* 2. *Aphor.* 6. that heavy
" Water converts the Matter of Tranſpiration into
" an Ichor; which, being retained, induces a Ca-
" chexy;

" chexy; what Miſchiefs will enſue hereupon, every " one ſees; not only Pains in the Limbs, livid Spots " in the Surface of the Body, Ulcers, *&c.* from the " Acrimony of the undiſcharged Moiſture; but ma- " ny beſides of thoſe perplexing Symptoms, which " go by the Names of *Hyſterical* and *Hypochondria-* " *cal*, that may take their Riſe from the ſame " Source." By which it may plainly appear of what pernicious Conſequence the Nature of Clay is; but leſt there are not enough ill Properties in the Water, that is taken out of ſuch ſtagnating Wells, whoſe Bottoms are a Clay, and with which many Thouſand Barrels of Drink are brewed, truly, there muſt be an additional Evil, by a Heap or Pat of Clay on the Bung-hole, which, by the Jolting of the Dray-Carriage, is often waſh'd for ſome Miles together into the Veſſel, where it afterwards ſubſides, and becomes a Share of the *Fæces* that ſuch Drink feeds on; by which its Eſſence is conveyed into the Body by the Vehicle of ſuch Beer or Ale. And as a farther Proof of the metallic, ſaline Parts contained in Clay, we may only obſerve the glazy Quantities that run or gather from it, by the Vehemency of the Fire wherein Bricks are burnt that are made of the ſame Earth. And therefore, in Time, the diſcerning Part of the World will explode ſo naſty and unwholeſome a Thing from being uſed about their Caſks of Drink, not only for the above-mentioned Reaſons, but alſo for ſeveral others that I have mentioned in my firſt Part, and particularly for one I never yet took Notice of; and that is, when ſuch Pats of Clay are much mixed with the Yeaſt, that works ſometimes ſeveral Days together through the Hole in its Centre, and remains on the Bung-hole a conſiderable While, there is apt to breed, as I have ſeen many times, ſeveral Worms from the Heat of the Weather, and the putrifying Natures of the Clay and Yeaſt: But what the Eye ſees not, the Heart rues not; for ſo it gene-

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rally is when Servants have the Bunging and Unbunging of ſuch Caſks of Malt-Liquors, and thereby paſſes unobſerved by the many Cuſtomers. In this Caſe the Country People are more ſagacious, where many, who live among Plenty of red Clay, refuſe any Application of this Sort to their Caſks; On the contrary, they conſtantly uſe the Bung I have writ the Dimenſions of in my firſt Book, and follow the right Method I have there mentioned of managing the ſame. Page 65. Theſe Conſiderations lead me ſtill further to make Obſervations on the three Principles of Water, Malt, and Hops. And firſt of *WATER.*

IN my Brew-houſe, there were uſed two Sorts; one the New-River, the other a Well: The New-River I muſt own is the beſt Sort that *London* affords for Brewing, which was kept in a Reſervoir or great Ciſtern, containing about thirty or forty Barrels under Ground, over which was a wooden Floor, where a Firkin-man filled his ſmall Caſks of Beer three Times a Week; and, as I remember, this Ciſtern was never cleaned in my Time; for it was thought there was Buſineſs enough above Ground: But no Matter: Who ſees our vaſy, muddy Sediments, that often increaſed by the Foulneſſes of new Supplies, and ſubſided at the Bottom; where it from Time to Time tinctured the ſucceeding Quantities of freſh Waters with its corrupt, unwholeſome Qualities that keep Company with the Beer or Ale made with it to the laſt? Notwithſtanding, ſtrictly ſpeaking, all Brewing Utenſils ſhould be as neat as any uſed in Dairies, and accordingly are kept ſo by many, thoſe that brew their own Malt-Liquors eſpecially. However it was thought good enough to brew with, and relax the hard burnt Corns of the unwholeſome brown Malt. And, for the Pale Sort, we uſed the ſharp, hard, ſtagnated Clay Well-water, that was thought moſt proper to extract the Quinteſſence out of this tena-

tenacious, tough Grain. I have uſed the *Thames* Sort in Brewing to a conſiderable Advantage; I mean in making a greater Length of Drink from Malt by this Water, than any other would do in *London*; but how agreeable this was to the Health of the Drinker, if taken in the worſt Part of that River (for the beſt I own is a good Water) I leave to better Judgments. I ſhall only relate what a Perſon told me he tried on this Account; and that was, when he was Journey-man to a Diſtiller, and his Maſter abroad, he took the Opportunity of ſatisfying his Curioſity, by charging the Still with about 100 Gallons of *Thames* Water, and had for his Satisfaction only one off that he taſted, but ſoon ſpit it out in Haſte, as being of an unſufferable, naſty, brackiſh, muddy Reliſh. Another Caſe was, that a Maltſter, living within a few Miles of *Dunſtable*, was reported to have the beſt *October* Beer, by making Uſe of his Horſe-pond Black-Water, and accordingly it was taken by the Country for an Orthodox Story; and, for what I know, it may have led others into an Error of uſing the ſame unwholeſome Sort, in Hopes of having the like fancied Succeſs. But was I to act only as an Hear-ſay Author, I ſhould certainly be very culpable as well as they, and more ſo as the Propagator of ſuch conſiderable Damage, inſtead of detecting Errors, and directing profitable Methods. But, to do the World Service on this Account, I ſhall here declare how a Perſon may brew with foul Water (the Clay, Allum, and ſome other Mineral Sorts excepted) and yet have ſound Beers and Ales, *viz.* —— When you are confined to uſe a troubled, muddy, greeniſh, or even an ill-ſcented Water, as many are in the Country, who have no other Supplies than what Ponds or Ditches, Ciſterns or Tubs, afford, that generally, in dry Summers, become ſtagnated, and often contain in them many ſmall Worms and other *Animalcula*. I ſay, in ſuch a Caſe, boil your

Water; and, while it is heating, throw half a large Handful of common Salt into a Copper of it, that holds a Barrel; and, as the Liquor grows hotter, there will a Scum ariſe, which muſt often be carefully taken off, till no more appear: Then put ſuch your boiling Water into the Tun or Vat; and, when cooled by a Pan or two of Cold, run your Malt on it by Degrees, as directed, and you'll find that ſuch foul Water will not only produce you a ſound Wort, but alſo a white Yeaſt. For I am often forced by Neceſſity to brew with ſuch Water, having only a Current out of the common Road that feeds my Ditch, and that a Pond in my Garden. How happy alſo ſhould the *Londoner* think himſelf for the Communication of this moſt ſerviceable Secret, on Account of the *New-River*, *Thames*, and *Hampſtead* Waters, that are very apt to run foul on great Rains and Winds; but, by this ſalubrious Antidote, are obliged to throw off their otherways foul, naſty *Fæces* or Sediments, by a Scum that is hereby eaſily clear'd off, before it paſſes the ſeveral Digeſtions of the Maſh-Tun, Back, or fermenting Tuns; which when the Water was in ſuch an ill State, neither I, nor the Workman that brewed for me, took any Meaſures to cure this grand Evil; for indeed, to ſay the Truth, I then had no Notice of the ill Qualities of theſe fæculent Parts and Scums; though, if we will but employ our Reaſon, there may be a true Conception eaſily made of both their unwholeſome Natures. The firſt ſhew themſelves to be the earthy, vaſy Parts of the Water, by their ponderous Subſidence; for, whenever there is ſufficient Time and Opportunity allowed them, they will not fail to become a Body of *Fæces* at the Bottom of any Veſſel that contains them. The ſecond reſults from the firſt, as being the more light and frothy Part of thoſe *Fæces* or Sediments, and are raiſed or ſeparated from them, by the Agitation of the fiery Particles of the

heated Water and Salt; and is of ſuch Conſequence to avoid, that every old Woman, that can cook herſelf a Bit of Meat, will be ſure not to be wanting in her Care of ſalting the Water, and deſpuming as faſt as it appears, leſt its pernicious Nature corrupt both her Meat and Soup, by being boiled into the ſame. And ſhall the Brewer be wholly regardleſs in this Matter, though he has a thouſand Times more Reaſon; becauſe he has more than a thouſand Times the Quantity of thick, troubled Water to uſe and prepare for the moſt noble Body in the World, even that which is human? But ſo it is through a long Series of ill Cuſtom and Ignorance, that this is become one of the leaſt regarded Articles by many in the common Brewery. For in Truth, I never knew one of them in my Life that ever attempted to take off the Scum off the Water or Wort. On the contrary, when I have argued with a common Brewer, near me, of the horrid Naſtineſs of ſuch *Fæces* or Scum: — Oh! ſays he, I matter not how foul my Water is, ſince I can bring my Wort off from my cooling Back, as fine as I pleaſe. — And really ſo it was, that by this Means my Cuſtomers were gulled out of any Scrutiny concerning the Water that they brewed their Drink with; for, if they could ſee the Liquor fine in the Mug, or Glaſs, all Queſtions about the Water and Scum were hardly ſo much as once thought on; tho' in Truth, nothing belonging to Malt-Liquor deſerves it more, and therefore I ſhall here obſerve the Abſurdity of this Brewer's Anſwer. — Does he not hereby as good as tell us, he cares not what the Nature of the Drink is, ſo it take the Eye and Heart of the Drinker, and excuſe him from any Suſpicion of Fault, tho' at the ſame Time, in Fact, ſuch a one is no leſs than his own Proficient at the Expence of my Health; for, ſuch as the naſty Nature of ſuch *Fæces* and Scum is, ſo much is the Drink tinctured with its Quinteſſence

teſſence and unwholeſome Qualities, by being boiled all together, and thereby ſo united, as that neither Fermentation, nor Age, can ever diſunite or ſeparate ſuch its ill Properties, while the Drink indures; becauſe it is the Nature of Ebullition to conjoin and aſtringe the Parts of all Ingredients that come under its igneous Potency. This may alſo ſerve as an Anſwer to all thoſe who are ſo vain to ſay, they value not any Foulneſs of Water or Wort, for that Fermentation will clear it, and throw off all by the Yeaſt. A poor Shift indeed, tho' a very common one! But how much the Health of the Cuſtomer is concerned in ſuch Management, I leave to the Judgment of the Reader. In the next Place I am to obſerve, that, to the naſty *Fæces* or Sediments of the Water, there are often added thoſe of the Malt; for in my Brew-houſe, where we brew'd five Times a Week, it is not to be ſuppoſed that we could give the Wort a due Time to make its Sediments in the Backs, nor Leiſure enough to run it off by the Cock in ſuch a ſmall Stream as was requiſite to drain it fine into the Working-tun; ſo that here both the *Fæces* of the foul Water, and thoſe of the Malt were joined together in ſome Meaſure, and in this Condition work'd and fermented all Night till the Morning, when we ſold perhaps twenty Barrels by the Gallon; that is, by Pails and Tubs, at Two-pence and Two-pence Halfpenny *per* Gallon. The reſt we ſent out by the Dray; but how wretchedly unwholeſome muſt that Œconomy be, where ſuch new Malt Beer was drunk the ſame Day it came from the Brew-houſe, or the Day after, as I have known many do, before it has well done working; they not conſidering that the human Body is a Sort of Alembic that diſtils or ſeparates the pure from the impure, and then what muſt become of the gouty, yeaſty, fæculent Parts of ſuch a Compound naſty Liquid? Is not this enough to leſſen our Wonder, when we ſee many, of the Town-born eſpecial-

ly, look with white Faces and pale Lips, attacked with frequent Cholics, eaten up with Scurvy, and emaciated by lingring Conſumptions, that undoubtedly are often the Effects of bad Drinks; which by Conſequence make large Lodgments of Corruption in the human Syſtem, while they ſtuff and load it annually with innumerable Draughts of Dregs and Foulneſſes contained in ſuch thick unſettled Drinks. But I wiſh I could end here, and had no further Reaſon to employ my Pen, in expoſing this bad Huſbandry, that extends itſelf too often to the Gentleman and Tradeſman's Cellar, where the Barrel, Kilderkin, or Firkin, is taken in for Family Uſe: Here then by the Miſmanagement of the Servant, or through Neceſſity of having none but one Caſk to tap, the Veſſel is ſet a running before it has had Time to clear itſelf; and then there are little Hopes left of drinking fine Beer out of that Caſk. This was often the Caſe with ſeveral of my Cuſtomers, tho' it is certain, no Malt-Liquor whatſoever can be good and wholeſome, if it is not truly clear and fine, and I think I may juſtly add, if it is not free from all naſty *Fæces* that too often lie at the Bottom of Caſks, in more than ſmall Quantities, and tincture the Drink with their bad Qualities; but ſome there are who vainly fancy that Beer (eſpecially the aged Sort) ought to have ſomething to feed on, otherways, ſay they, it will ſoon grow ſour. To this I anſwer, that neither Beer nor Ale can be drawed off ſo fine from the Maſh-Tun or Cooler, as to want a ſufficient Sediment to feed it, as may be eaſily proved by an Obſervation when the Drink is drawn off, that never yet appeared to me without rather too much of this filthy Compound, which by its earthy and ſaline Parts naturally induces Hardneſs and Eagerneſs in the Liquor. And, altho' Ale and Beer, loaded with ſuch Dregs, may become fine in Time, yet is ſuch Drink more liable to be diſturb'd on Change of Weather,

than

than that which is more free from ſuch an ill Compa-nion; and that by Reaſon the Particles of the Atmoſphere, hovering about the Caſk, will not fail on certain Seaſons to join thoſe in the Caſk of their own Nature, and raiſe a ſort of Fermentation, to the great Diſturbance of the Drink. And this Contact is more or leſs influenced, as the Cellar is of a dry or damp Nature: If it is a Chalk, Gravel, or Sand, then it is beſt Brewing in *October*, to give the Drink Time to paſs its Digeſtions in the Barrel before the Summer comes on: But if a Clay or any Water is apt to ouze, and ſtand in the Bottom of a Cellar, then *March* is to be preferr'd, that the Malt-Liquor may make its Sediments go through its Digeſtions in the Barrel, and get a fine Body before the Auſterity of the Winter renders ſuch a damp watry Place too chilly by the frequent Interruptions of Froſts and Thaws. To this Purpoſe alſo ſome are ſo curious, and that in my humble Opinion with a great deal of Reaſon, to brew their pale ſtrong Beers in *March*, on Account of the leſſer Share of Fire that ſuch Malt has in it, than the brown Sorts, and therefore requires a whole Summer to meliorate and ripen it directly after its Brewing: But with the high dry'd brown Sort it is otherways, by reaſon of the great Quantities of Fire uſed in its Drying or rather Parching, whereby it is the more fitted to agree with any of its contrary Principles, as the damp, cold Seaſons of a ſucceeding Winter, which relaxes and better reduces ſuch Drink to a Melioration. It is this then that induces a ſagacious Perſon to brew all his Brown ſtrong Beers in *October*, that they may have their Cure before the Summer comes on. But obſerve, that you don't put too much Salt into the Water you brew with; if you do, it will certainly ſtale it very ſoon, and leave a Drought behind inſtead of quenching Thirſt; and, when you uſe any, there ſhould be more Hops put into the Wort to balance the hard ſtale Quality of the Salt in

the Drink, or rather my alcalous Balls, which are excellent to keep off Acidity, and preſerve it in a mild, ſound Condition; or ſome of thoſe Receipts may be made uſe of, which I intend to publiſh in my next Book, that will anſwer ſomewhat of the ſame Purpoſe.

CHAP. X.

An eminent Phyſician's Way of Brewing Ale *and* Beer *without Boiling.*

THIS paradoxical Method has for ſome Years paſt gained but little Reputation in the World among the ignorant, opinionated, and ſelf-intereſted Part, whoſe Tenets are ſo attached to Particulars, that a general Improvement can ſeldom get Footing till Time and Cuſtom paves its Way by the Example of the truly wiſe and impartial, who ſuſpend their deciſive Judgments till they have brought a Matter in Queſtion to the undeniable Teſt of a demonſtrative Experiment, and ſcorn to condemn a Thing (that has any Shew of Reaſon on its Side) by meer Speculation; for, as he has juſtly obſerved, thoſe who are wedded to Tradition, and their own Humour, give little Hopes that Reaſon will ſway their bigotted Perverſeneſs. But, to prove the Rationale of this new Method, he has made ſeveral Remarks as a Student in Phyſic on the Animal Œconomy, and ſays, that as our Bodies ſuffer a daily Waſting by our innate Heat, Perſpiration of the Spirits and Humours through the Pores of the Skin, and the Impreſſions of the ambient Air, there is required a daily Recruit of Nouriſhment. To this End the Variety of Foods and Liquids are to be conſidered as they are more or leſs healthful to our Bodies; and as the Stomach is the Agent that digeſts all Meats into a milky Subſtance called *Chyle*, which, paſſing into the Guts, meets

meets with two different Juices from the Gall and Sweet-bread; that, being mix'd together, create an Ebullition or Fermentation, which further perfects the Chyle, and is ſucked thence by the milky Veſſels, and carried through ſeveral Receptacles till it mixes with the Blood, which returns its Nature and Nouriſhment to the Heart, whoſe Pulſation drives it into all Parts of the Body. And, being thus intermixed with the Blood, it is at length tranſmuted into it, like the former.

The Blood, being thus made out of Chyle, is by the Arteries conveyed to all Parts of the Body for their Nouriſhment: But the moſt pure and ſpirituous Parts aſcend up to the Brain (where out of it the Animal Spirits are made) being the Seat of Fancy, Reaſon, Judgment, and Memory; for from the Brain are all the Nerves or Sinews divided into all Parts of the Body, which cauſe its voluntary Motions, as Walking, Standing, Labour, *&c.*

First then, if our Drinks or Meats be either improper in Quality, or too great in Quantity; in either Caſe it diſturbs this curious Œconomy, Exceſs in both laying the Foundation of moſt Diſeaſes; for every Thing delighteth to produce its own Simile. Therefore all unwholſome Meats and Drinks are uncapable of being converted into a pure and healthy Blood; but will in Time acquire a Sharpneſs or ſome other evil Quality; which, being carried to the Brain, clouds it with Vapours, interrupts its noble Faculties, and by often Repetitions makes a Magazine of corrupt Humours: By which it appears, what vaſt Importance good Meats and Drinks are of for ſecuring Health of Body, and improving all our intellectual Faculties; becauſe the Paſſions of the Mind follow its Temperament; for, ſuch as the Diet is, ſuch will be the Blood. To this Purpoſe this ingenious Gentleman declares, the firſt Step towards the Generation of the Stone, Gravel, Gout, Conſumption, and

many Diſeaſes is the drinking ſtrong, hot, ſharp, intoxicating, ſtale Liquors, and fiery prepared Drinks, as Beer high boil'd with Hops, Brandy, Rum, old Wines, which for the moſt Part tend towards a hot ſharp Spirit, breed a hard gritty Subſtance in the Paſſages and Ureters, and burn up the radical Moiſture. Which to prevent in the ſucceeding Generation, it is now practiſed by ſeveral of the great ones, to confine their Children to ſelect Diets, conſiſting chiefly of Puddings, Soups, *&c.* but little of any Fleſh; and to that Degree, that I have known a Boy and Girl petition the Servants for a Morſel of a Fowl. This is done in order to prevent a Lodgment in their Bodies of thoſe pernicious Scorbutic Salts, that all Fleſh abounds with: And ſo in their Drinks they are not leſs curious.

Secondly, THE boiling Hops two, three, or four Hours in Beer, is a Thing of pernicious Conſequence; becauſe this Uſage deſtroys the mild, opening Qualities of the Drink, and in their Room inſtitutes and impregnates the Wort with a harſh, bitter, aſtringent Nature; and, when Hops and Beer are ſo boiled, they prove very injurious to ſeveral Conſtitutions; eſpecially thoſe inclinable to the Stone, or Gravel, by their extraordinary reſtringent Operation.

Thirdly, THAT the boiling of Wort, or any ſpirituous Liquor that is extracted from Things whoſe Body is opened by Fermentation, as Malt is in a very high Degree, does not only deſtroy and evaporate the fine, thin, ſubtile Spirits, which are only capable of Penetration; but it does, as it were, fix or ſtagnate the Whole; by which it becomes of a groſſer, fuller, or ſtronger Taſte in the Mouth, which through Cuſtom and Ignorance is eſteemed a Vertue, but the contrary is underſtood; for thereby it becomes of a heavier Operation, lies longer in the Stomach, and ſends groſs Fumes to the Head; which is obvious by taſting unboiled Wort, and that boiled with or without

out Hops, and you'll find that this laſt has not only loſt its pleaſant ſweet Taſte, but its opening, penetrating Vertues, by which it becomes of another Nature and Operation, which Fermentation does in ſome Degree help, but it cannot regain thoſe fine, thin, ſoft Vertues that it loſt in boiling, the fierce Heat of the Fire being an utter Enemy to all ſpirituous Drinks, Liquors, and Cordials. It is alſo to be obſerved, that unboil'd Ales and Beers do generally drink ſmaller in the Mouth, than that which is boiled; becauſe its ſpirituous, ſweet, balſamic Qualities are not ſo much deſtroyed, ſuffocated, or ſtagnated by the igneous Particles of the Fire as the other; but it moſt naturally warms the Stomach, and is not ſo ſubject to ſend Fumes to the Head, runs thro' the Body quicker, purges more powerfully by Urine, which are naturally Teſtimonies of its Vertues, and that the better Parts are preſerved in the Preparation. It is alſo to be obſerved, that all Drinks made without Fire, altho' with raw, crude Fruits, Apples, Grapes, and the like, as Wine, Cyder, and many other Sorts, are not only more ſpirituous and briſker in Operation, but alſo more cleanſing and penetrating, if Order and Temperance be obſerved. But note, that all fermented Drinks are much better and greater Preſervers of Health when new, than Old or Stale; for Age turns their mild Vertues into hard, inflammable, and keen Properties; for this Cauſe, all Stale Beer, old Wine, and Cyder are far hotter in Operation than new, and conſequently more prejudicial to Health, eſpecially in the Gout, Gravel, Stone, and Conſumption; therefore thoſe, who would drink Beer and Ale more wholeſome and homogeneous, may obſerve the following Rules, *viz.*

First make your Water or Liquor near boiling hot, then put ſo much into your Maſh-Tub, as will wet your Malt; ſtir it, and let it ſtand Half an Hour; then add your whole Quantity of hot Water that you pur-

purpoſe to put up for the firſt Time, and let it ſtand an Hour and an Half; but, if you would have your firſt Wort very ſtrong, then two Hours, if the Seaſon be not hot; then put what Quantity of Hops you think fit into your Receiver, and let your Wort run on them; and, after your Hops have infuſed an Hour and an Half in your Wort, then ſtrain it off into your Coolers, and you have done with the firſt Wort. Then put upon your Malt your ſecond Liquor near the ſame Heat as the firſt, and let it ſtand only one Hour at moſt; then take what Quantity you pleaſe of freſh Hops, and put into your Receiver, as before, and let your ſecond Wort run on them; then take both ſecond Wort and Hops together, and put up into your Copper; there let them infuſe till your Wort is near boiling, but not boil; then ſtrain this alſo into your Coolers, which you have done with alſo. Now, if you will make Small-Beer, put what Quantity of cold Water you think fit on the Grains, and let it ſtand Half an Hour; then run it off to ſome freſh Hops, and put both this third Wort and Hops into the Copper as you did the ſecond, and let the Hops infuſe till they are near boiling; then ſtrain it into your Coolers, and you have done. But remember that your Water never is to boil; for Boiling irritates and evaporates the ſubtile, fine, penetrating Gas or Spirit; and then the Water becomes more harſh, hard, fixed, and dead, which renders it not ſo capable to draw forth or extract the ſweet Vertues of the Malt; to prove this, boil a Quantity of River Water, put it into another Veſſel, and let it ſtand a While; then take a like Quantity of cold, and put into another Veſſel, and let that ſtand the ſame Time as the other, and you'll find the boiled Water to ſtink, and never be ſweet again; but your Water, which remains intire, not touched with the Fire, will alſo putrify, or rather ferment, but then it will recover and become ſweet and good for any Uſe, as before.

Again,

Again, tho' I have mentioned the making of Small-Beer after the Ale, I would here be underſtood, that all ſuch Beer is injurious to Health, and the common Drinking thereof does generate various Diſeaſes, eſpecially the Scurvy; becauſe in the Grains is left nothing but a terrene groſs Phlegm of a tart ſour Nature, which incorporates with the Water; and, to make it much worſe, it is generally boiled with the Dregs of the Hops, which have been boiled ſeveral Hours before in the firſt and ſecond Worts, that ſtill increaſes the Miſchief: However, of this I have amply wrote in my firſt Book.

The Quantity of Hops for Beer, if you propoſe to keep it Half a Year, or a Year, ought to be ſix or ſeven Pounds to a Quarter of Malt; but, for Beer or Ale that is to be ſpent preſently, two, three, or four, to eight Buſhels will ſuffice. Tun your Drink young, that is, as ſoon as it works, put it into your Caſk, and it will be much wholeſomer than if it ferments too high before. And, as to Boiling of Worts after they are drawn from the Malt, I do aver (ſays this Gentleman) that it is not only unneceſſary, but miſchievous for the foregoing Reaſons; 'tis not Boiling, but a due Fermentation that makes excellent generous Liquors. Malt paſſes through three Digeſtions: Firſt, by the Sun and Elements. Secondly, by its being made Malt; and, Thirdly, by its Infuſion in Water, and needs not a fourth by boiling; for, tho' I ſay it is to be heated, it is not to correct its Rawneſs ſo much, as to fit it the better to extract the Vertue out of Malt; which being once effected, all our Pains in Boiling is ſuperfluous; becauſe this Drink has paſſed through all the Digeſtions and Fermentations neceſſary to its Conſervation, and will keep accordingly; for I have made excellent Beer this Way, that has kept twelve Months, tho' ſix Months is long enough: But if any are dubious of the Veracity and Benefit of what is here advanced; for their farther Satisfaction

and

and Conviction, I refer them to Experience as the beſt Maſter.

CHAP. XI.

Sir Tho. Seabright's *Method of Brewing a Pipe of Pale Strong Beer.*

TAKE three Quarters of the fineſt white Pale Malt, let it be ground not too fine, but juſt that all the Corns may be broke; let your Water be ſoft, running, Rain or Pond Water; boil it Half a Quarter of an Hour, then lade it off into your Maſhing-Tub; let it ſtand till you can juſt bear your Finger in it: Then put in your Malt by a little at a Time, keeping it ſtirring all the While: It will take Half an Hour's Maſhing in this Manner: When done, cover it up cloſe, for two Hours and a Half, or three Hours, returning it back into the Maſh-Tub, till fine. At firſt letting off, put in fourteen Pounds of the fineſt Pale Hops, rubbed in with your Hands, that they may not lie in Liquors, boil it to twenty, not exceeding thirty Minutes, with as much Fierceneſs as poſſible, to be kept in the Copper; immediately after throw the Liquor off into the Cooler, ſtraining the Hops clean out; let it be almoſt cold, not Blood-warm, before you let it down into your Working-Vat. One full Quart of good Yeaſt is enough for this Quantity; you may let it work one or two Days; then tun it, keeping the bottom Sediment out; let it be filled up every Day for a Week; after bung it in three Weeks or a Month; it is ſometimes near twelve Months before it is fine for Bottling.

THE above Receipt was communicated to me by that honourable and generous Gentleman; on which I ſhall

I ſhall only make this ſhort Remark, that in my humble Opinion his Boiling the Wort but Half an Hour with the Hop is not agreeable, becauſe it can't have its due Cure in ſo little a Time, tho' the Hop has; but, as I have already writ, and intend hereafter to publiſh more on this Subject, I refer you to the ſame.

The Fraudulent Practice by ſhort-meaſured Caſks *expoſed.*

CASKS. —— Theſe are unavoidable Neceſſaries, and muſt be had at any Rate: Their Sizes in *London* are generally the Pin, Firkin, Kilderkin, Barrel, Hogſhead, and Butt; of which Number there are three that differ from the reſt in Meaſure on a particular Account; and they are the Ale Firkin of eight Gallons, the Ale Kilderkin of ſixteen, and the Ale Barrel of thirty-two Gallons: The Small-Beer Firkin being nine Gallons, the Small-Beer Kilderkin eighteen Gallons, and the Small-Beer Barrel thirty-ſix Gallons. Now, as there is a conſiderable Difference in the Meaſure of theſe three Caſks, I think it but doing Mankind common Juſtice to take Notice of a horrid Fraud that was never yet expoſed in Print, committed by ſome ill Perſons concerned in the Small-Beer Brewery for many Years paſt, and that by carrying theſe Ale Caſks full of Small and Ten Shilling Drink inſtead of the Beer Caſks, whereby many honeſt Cuſtomers have been impoſed on to a conſiderable Damage. A particular Caſe or two I ſhall here mention as it in ſome Degree related to myſelf. My Father happened to ſerve a Clock-maker in *Fleet-ſtreet* for ſome Years with Table-Beer in Kilderkins, and other Caſks, till at laſt he was ſupplanted by a Firkin-man, who by a villainous Invention impoſed on them both in this Manner, *viz.* He comes into the Shop under a Pretence of buying a Clock; and after he had agreed to the Price, he tells the Owner that

that he was a Brewer, and would furniſh him with Drink till all was paid. To this the Clock-maker agrees, and the Debt was diſcharged in theſe ſhort-meaſured Caſks, that generally wanted conſiderable of being full. Now this Impoſtor did not confine himſelf to this Way of cheating only, but was detected in ſeveral other ſly and notorious Facts. Once a Gentleman that was another Cuſtomer came to a certain Brew-houſe, where he took up his Drink, to enquire for him; but, he being abſent, told his Caſe to the Maſter-Brewer, a worthy Perſon, that there was a Caſk brought into his Cellar by two Men ſeemingly as a full one, but was truly an empty one or near empty, and at the ſame Time carried another away from off the Stilling that had ſome Gallons in it. At another Time this Monſter in Iniquity ſold his Firkin-Trade to a Perſon for valuable Conſiderations, and preſently afterwards went about and perſuaded ſeveral of the Cuſtomers to take Beer of him again, to the great Prejudice of the honeſt Purchaſer. And now, as I have engaged my Pen ſo far, I will proceed to calculate what a Family, that drinks a Kilderkin of Ten Shilling Beer a Week, may ſuffer by ſuch a Fraud, that wrongs the Cuſtomer of two Gallons in the Meaſure of the Caſk, and ſometimes another by the Veſſel's wanting of full, which is three Gallons in all; and amounts to Ten-pence *per* Week, or two Pounds three Shillings and Four-pence *per Annum*; a Matter I think of Conſequence, and calls for a ſtrict Obſervation. But here I would be underſtood, that I do not extend my Reflection on the honeſt Brewer or Firkin-man; for I have known a Firkin-man that would always not only ſend out lawful Caſks, but full Meaſure, and ſcorn'd to be guilty of the leaſt Wrong this Way: So likewiſe the Strong-Beer Brewers, who I believe are moſt of them Men of ſtrict Juſtice and Probity; an Inſtance of one of them I ſhall here mention, as it occurr'd to my Know-

ledge

ledge from the Relation given me by the Brewer concerned in the Affair.—An eminent wholeſale Victualler that ſold Stout and other Stale-Beer by the Butt and Hogſhead to thoſe new ſet up, who are often obliged to furniſh themſelves this Way, till they can get a Stock of their own at a ſufficient Age, agreed with this Brewer for a Number of Barrels of Keeping Beer, on Condition he would let him have ſo many new Hogſheads as would contain all the Drink. Now in this Proviſo, the Victualler had a ſiniſter End, that the Brewer at firſt perceived not; for, being acquainted with the Cooper that was to furniſh them, he perſuaded him to make them under Meaſure, that he might get a Profit by ſelling to the Cuſtomer a ſhort Hogſhead, inſtead of a full-meaſured one; and though he thus ſold by the falſe Caſk, he bought by the true gauged ſtarting Barrel; which happened afterwards to be diſcovered by the Brewer, who was ſo honeſt a Man, that he gave a large Sum out of his own Pocket to be diſtributed among thoſe that had thus ſuffered, that they might have ample Reſtitution made for the Fraud committed by Means of his Caſk, tho' unknown to him. I have been the more particular in the Relation of theſe Pieces of Knavery that they may be a Warning and Prevention to Gentlemen, Tradeſmen, and others, how they deal with Men of bad Reputation, which this Firkin-man generally had; who, though he carried on his Frauds to a great Degree for a long Time, lately died very miſerably poor and diſtracted.

But I can't yet diſcharge my Pen from this Sort of Impoſition, by Reaſon that two conſiderable Small-Beer Brewers were alſo guilty of ſending out theſe Ale Kilderkins and Firkins to their Cuſtomers, one whereof declared that he had done it, but left it off ſome Time ago, when he thought he had got enough (I ſuppoſe) to truſt Providence by honeſt Meaſure. As to the other, I don't

know whether he ever did. A horrid Thing indeed, for Perſons ſometimes to ſuffer not only by Drinks made with unwholeſome Waters, Malt, Hops, and Yeaſt; but, to compleat the Scene of Villainy, muſt have ſhort Meaſure into the Bargain, to a conſiderable annual Loſs, where there are two, three, or four Kilderkins conſumed in a Week, as in ſome Families there are! Bad indeed it is with the Cuſtomer, who is damaged by ſuch a Wrong; but worſe it will be to him that commits it, who muſt die without true Repentance, if a Reſtitution is not made, and he of an Ability to do it; and how that can well be done to thoſe that may be deceaſed in the Time, and others that he may never come at, I know not. However, with many who have a Convenience of Brewing their own Drink, the Riſque of dealing with ſuch Men may be avoided, and you may pleaſe yourſelves ſeveral Ways, by ſo doing. Yet, where the neceſſary Room and Utenſils are wanting, the honeſt common Brewer, who uſes a right Method, may ſupply ſuch beſt, and who I muſt own is commonly provided with the beſt of Coolers, Backs, Tuns, Room, *&c.* for this Purpoſe.

The End of the Second Part.

THE

London *and* Country BREWER.

CONTAINING,

I. Of the four QUARTERS of the Year, as they relate to Brewing MALT-LIQUORS.

II. The State of BARLEY for the Year 1737.

III. Of MALT-KILNS.

IV. of FUELS for drying the ſeveral Sorts of MALT.

V. Of the great public BREW-HOUSE.

VI. Of the ſmall private BREW-HOUSE.

VII. An excellent Way of Brewing a But of Pale ſtrong BEER, by an Inn-keeper.

VIII. Brewing a Hogſhead and a Half of PALE-ALE from freſh MALT, by a private Perſon.

IX. The beſt Way to make ELDERBERRY-BEER (called EBULUM) CHINA-ALE, and ſeveral other Sorts.

X. Of the DEVONSHIRE white ALE.

XI. A SCHEME for Brewing ſtrong MALT-LIQUORS after a new improved Method.

XII. Of WORTS, and their Improvements after a new Method.

XIII. The BARNSTABLE Way of Brewing a Hogſhead of fine Pale ALE.

XIV. Of Working BEER and ALE after a new Way, to their great Advantage.

XV. Of Brewing BUTT-BEER called PORTER.

XVI. An Account of the deſtructive WEEVILS, with ſeveral Ways to deſtroy them.

XVII. Common PURL improv'd, by a famous new cheap Receipt now in Uſe, rendring it far more wholeſome and pleaſant than by the common Way.

To which is added,

The CELLAR-MAN,

Or many Receipts to cure, preſerve, and improve DRINKS in the Caſk; wherein the Caſe of CLOUDY-BEER is accounted for, and its effectual Cure amply preſcribed. A new advantageous Way to get out the SAP of new CASKS, and to Seaſon them at once; likewiſe particular DIRECTIONS for BOTTLING MALT-DRINKS; with many other uſeful Matters, never before Publiſhed; truly neceſſary for thoſe who are concerned in *Brewing* or *Selling* MALT-LIQUORS.

By a Perſon formerly concerned in a public Brewhouſe in London, *but for Twenty Years paſt has reſided in the Country.*

PART III. The SIXTH EDITION, Corrected.

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THE

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THE

PREFACE.

HAVING *been pretty full and particular in the Prefaces to my two former Treatiſes, on this Subject, I ſhall be the briefer here; and only obſerve, that, as I annually travel through ſeveral Counties in the Way of my Buſineſs, I have had the greater, and really the only Opportunity of thoroughly acquainting myſelf with the different Methods of making Malts, brewing Beers and Ales, and inſpecting into their After-management: In all which (though there be ſtill too much Reaſon for Complaint) bleſſed be God, I have ſeen great Improvements, eſpecially within theſe few Years, which, as they were very much wanted, and of great Importance to the Nation, induced me to uſe my utmoſt Efforts, in ſome Meaſure to bring them about, ſtill hoping to ſee them advance, by the laudable Endeavours and Example of ſome unbiaſſed Perſons, who will not any longer ſubmit to ſupport bad Cuſtoms, merely for the Sake of Profit, in a Caſe that ſo nearly*

concerns the Health and Well-being of Multitudes. The aforesaid new Methods of making Malts, brewing Beers and Ales, and their advantageous After-management in the Cellar, with Variety of other useful Matters never before published, I have here freely communicated; which, I hope, will not only render the Work compleat, but also be attended with its most wished-for Effects, viz. *The fully apprising the unwary Drinker of his Danger, as well as better informing the Judgment of the Artist, and directing his Practice in the right Channel.*

CHAP. I.

Of the four Quarters of the Year, as they relate to Brewing Malt-Liquors.

I. *Of the* Spring Quarter.

AIR of itſelf is a Fluid of an elaſtic or ſpringy, yielding Nature, of a thinner or thicker Body, as it is more or leſs compreſſed, dry, or moiſt. From the two Principles of Heat and Moiſture all Bodies are opened, and made to exert and diffuſe their innate good or bad Qualities, whereby they are rendered capable of mingling or incorporating with the Air of the Place. From hence it is, that there is a pregnant Reaſon for brewing in the Spring-time, becauſe then both Air and Water are ſtored with Exhalations from growing Vegetables, which join others, and eſpecially thoſe of the ſame Kind: And thus it is, that the Particles, which float in the Air, are, as it were, ſucked in by thoſe of the Water, Malt, Wort, and Hops, to their great Improvement, eſpecially in the open Country. Of this Communication, the ingenious Mr. *Boyle* makes a Sort of Proof, by telling us that a Piece of Allum diveſted of its Salts, and hung up in the Air, will in Time recover its priſtine State from the Salts in the Air. Others ſay, that if a Water is diſtilled from a fragrant Vegetable, and becomes almoſt vapid and dead, though at more than a hundred Miles from any Land, will yet in the Spring-time regain its Scent and Virtue, by joining in Contract with is ſimilar Particles, which float in the Air, and are diffuſed over the whole

Earth and Sea: As is alſo particularly apparent in Wines, Cyders, *&c.* which commonly fret when the Vines and Trees are in Bloſſom. Therefore the Spring-Seaſon muſt be very convenient for brewing Malt-Liquors; becauſe then the Pores of the Earth are unlocked, and the Aromatic Nitral Vapours ſet free after having been bound in by the Winter Cold; but now aſcend by the warm Powers of the Sun, which repleniſh our Atmoſphere with lively and ſulphureous Particles, ariſing from the ſweet Vegetables that now exert their Strength by the Rarefaction and Thinneſs of their Saps, and adminiſter their fragrant and ſalutary Effluvia's to all things they can come at; and that in the greateſt Perfection, when it ariſes from Corn-fields, Gardens, large Commons, and where Trees and Hedges are not too thick, and the Land too low and watery. And though Bloſſom-time is accounted dangerous for brewing even to a Proverb, yet I cannot help being of a contrary Sentiment, for Reaſons I ſhall by and by aſſign; and alſo becauſe the Air and Waters in *March*, *April*, and *May*, are ſeldom damaged by the Violence of Heats and Droughts, which makes me ſuppoſe the Saying was broached when the Art of Brewing was little known; for now the Springs generally run high by the Swell of the Winter Rains, that conſequently muſt render them more pure: So that in this Reſpect *March* far exceeds *October*, becauſe it is to be ſuppoſed the Waters then are low after a Summer's dry Weather, which in courſe leaves them very earthy. But the Rain Water in particular has the greateſt Advantages, becauſe it is freer from any earthy, ſaline, and metallic Quality, than any other Sort whatſoever. Beſides which, the fat, dewy, and vegetable Exhalations in the Atmoſphere, as they meet this delicate Water, muſt ſtill be an additional Improvement to it, and make it exceed all other Sorts at this Time of the Year for Brewing; and, eſpecially if Ale is made with it; which leads me to renew my former Obſervation, that now is the beſt Time to brew the pale and amber Sorts

of

of Malt-Liquors, for their more immediate enjoying the Rarefaction and Melioration of the Summer-Air, which beſt agrees with all Drinks made from tough Malts, that have the leaſt Share of Fire in them; as the Winter-Air does with the brown Sorts, whoſe Bodies are loaded with igneous Particles, and beſt reduced into a ſmooth, temperate Condition, by that frigid Seaſon; and therefore, *October* is very juſtly preferred for brewing ſuch high-coloured Liquors.

II. *Of the* Summer Quarter.

In this Seaſon is the Extream of Heat and Drought, as in Winter of Cold and Moiſture; and therefore it is not ſo agreeable to Brewing as the Spring and Autumn, becauſe it haſtens Fermentation too much: Upon which it has ſo great a Power, that it is difficult to keep the Drink from too high an Agitation; and then the Spirits fly away, which ſhould be moſt carefully preſerved for the Conſervation and Fining of the Drink. Now alſo Rivers, and more eſpecially Pond-Waters, are moſt impure, not only from the great Quantity of growing Vegetables, but likewiſe from the Breed of Inſects, that makes it both unwholeſome and improper for brewing. And here I muſt obſerve the Unhappineſs of thoſe People, whoſe Buſineſs neceſſitates them to live in a bad Air, and in the Uſe of worſe Water, which many in the low Grounds of *Kent*, *Eſſex*, and ſome other Parts of *Britain* do, particularly thoſe in and about *Prittlewell* and *Ratchford*, about two Miles from the Salt Water in the Hundreds of *Eſſex*, over-againſt the Iſle of *Shepey*. It is here the Water ſo affects the Land-ſprings, that both their Wells and Ponds afford them little other than a brackiſh alluminous-taſted Water; inſomuch that it cauſes their Drink which is brewed with it, to turn ſour preſently, and their Bread to rope as well as their Beer; and the more becauſe its ſaline Quality makes it ſo penetrating and ſharp as to extract and bring away with it the Tincture of that muddy Sullage or Earth, that lies in great Quantities on their Shore, as well as thoſe mineral Earths through

which they are ſtrained and paſs; and thereby probably communicates ſuch unwholeſome Qualities to their Bread and Beer, which cauſes theſe lamentable Effects; as the Natives themſelves juſtly believe, who ſay that their Water taints the Dough beyond the Power of the Fire to cure: For ſometimes, in two or three Days after it is baked, it will appear like Cobwebs, every time it is cut, and if broke, it will plainly ſhew it ſelf ſtringy and ropy. Not but that I muſt own this cobwebby, ropy Condition of the Bread may be, and is often brought on by uſing ſtale ſour Yeaſt, when the Water is abſolutely good. Yet here is a plain Proof of the Corruption of the Water, becauſe, if the Yeaſt is good, theſe Misfortunes will happen; to prevent which, ſome of them boil Hyſſop in the Water, others the Twigs of an Aſh or Black-thorn, and find it very much anſwers their Purpoſe both in Baking and Brewing. But there is a Difference even in brackiſh Waters, occaſioned by the Nature and Situation of the contiguous Earth; for, in the Yard behind the Governour's Houſe at *Upnor-Caſtle*, that lies on the River *Medway* about two Miles from *Rocheſter*, there is a Well out of which they pump a Water a little brackiſh; and yet it makes both excellent Bread and Beer, as I have often taſted: The Reaſon is, the Shore that lies near it is a clean Sand, and ſo is the Earth through which the Salt Water is percolated or ſtrained till it mixes with the freſh that ſupplies the Well: And what gives it a further Advantage is, that though it ſtands below the Level of the high Water-Mark, by which it becomes brackiſh; yet the Water is free from thoſe infectious Particles that a muddy Shore and a flat Situation would conſequently give it: For the very ſame Reaſon, the Inhabitants of the great Caſtle of *Dover* enjoy a moſt fine clear ſoft Water, out of perhaps the deepeſt Well in *Kent*; and that free of any brackiſh Taſte, becauſe the Earth, adjoining to the Salt Water, is a Rock of Chalk, wherein this Well is ſituated within leſs than a Quarter of a Mile from the Sea. And here I cannot but obſerve a

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Neglect that many are guilty of, to make Uſe of foul Pond or River Waters, that in particular require firſt a Clarification of their fulſome, unhealthy Particles, before they are uſed in brewing, and eſpecially ſuch as are ſupplied by Currents from the common Road, or other dirty Conveyance. But where there is no Conveniency for doing this, or that the Trouble and Charge are thought too much to give them Time in Ciſterns or Tubs to make their Sediments, the laſt Opportunity ought punctually to be obſerved; and that is, by ſcuming clean ſuch Water, as it is heating in the Copper: For though it may be objected, that theſe Sort of Foulneſſes may be diſcharged by the ſeveral after Fermentations, it is certainly wrong Management, to ſuffer ſuch Filth to accompany the Wort till that Time; becauſe the infectious Scum will be incorporated with the Drink, by the three Digeſtions of mixing with the Malt boiling and working, ſo as to tincture it with the ill Qualities that may be contained in ſuch Waters, as I have ſhewn in the Example of Diſtillation. But when neceſſitated to brew with ſuch foul Water, ſee the Remedy in my ſecond Part. Well-Waters now are ſometimes very low for want of ſufficient Supplies of Rain, and thereby the ſubterranean Circulation is ſlow, and almoſt ſtopped, which gives the Earth a greater Power to load ſuch Waters with earthy, mineral, ſtagnating, and inſanous Particles, which, in Spring and Winter, they are moſt commonly free from, by the Plenty of freſh Waters, that then ſaturate the Land; for which Reaſons, all poſſible Regard ought to be had to obtain Water in a true Order, as it is the Fountain of Life to all Vegetables; for by it they are generated, nouriſhed, and increaſed; and thus it opens the Gates of Nature, for all Properties to breathe and ſend forth their innate Qualities.—The ſofter and purer Part of Water may be drawn off, and the harder and more earthy ſaline left behind, by paſſing it through an Alembic. Another common demonſtrative Proof is that of our Tea-kettles, whoſe Inſides are loaded and cruſted with the

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terrene, and fix'd ſaline rough Particles of the Water, which conſequently muſt evaporate its better, ſofter, and more pure Parts by boiling, and thereby render it harder.

III. *Of the* Autumn Quarter.

THIS Seaſon is commonly attended with moderate Weather, and often fine Showers, eſpecially about *October*, that then begin to recruit the Rivers, Ponds, and Wells, with freſh Supplies of pure Water, after a dry Summer; which capacitates them to be more ſerviceable in brewing good Malt-Liquors, than in the preceding Seaſon: But are moſt advantageous to the brown Sorts, which ſtand in need of a cold Air to reduce their fiery, ſharp Particles, that by many, of the Country People in particular, is not at all regarded, whom I have known to uſe a hard keen Water for this Purpoſe, which in a great Meaſure locks up the Pores of this Sort of parched and burnt Malt, and ſo deprives them of their expected Length or Goodneſs of their firſt Worts; which a ſoft Water would eaſily extract and bring away, and which, in brewing ſtrong *October* brown Beer, muſt be very detrimental, becauſe it not only deprives them of their Quantity, but alſo endows ſuch Drink with a ſharp, griping Quality, that the ſooner brings on Staleneſs and Loſs. A further Proof of the Effect of hard Water we have very plain in a freſh Cod, which to dreſs nicely, the Cook cuts into ſeveral ſmall Pieces, in order, as they call it, to *crimp* it, by letting them lie in hard cold Spring Water about an Hour, and then boiling it in the ſame Sort; by which Management it will harden, curdle, and keep its Whiteneſs, inſomuch that it will eat almoſt as firm as Beef. But in caſe there is no other Sort to be had to brew this brown Malt with, or if Pond or River Water be foul, take ſome Aſhes made on a clean Hearth burnt to Whiteneſs, from green *Aſh*, or from *Beech* which ſome ſay is better; and after they have been well ſifted, put the fine Aſhes in a Bag, and hang it a whole Night in a Caſk, Ciſtern, or ſquare Tun of ſuch Water: It will not only ſoften the one, but

cauſe the groſs Particles of the other to ſubſide by Morning, and in a great Meaſure cure it of the unwholeſome, metallic Qualities, make it better, extract the Virtue of the Malt, and preſerve it againſt Foxing, being of ſo wholeſome a Nature as to be preſcribed by Phyſicians as a good Diuretic.

When ſuch Water is thus prepared for Brewing, draw it out of a Tub or other Veſſel, by a Syphon, or a Cock, placed three or four Inches above the Bottom, that the *Fæces* may be left behind. At a certain Town in *Suffolk*, from *Michaelmas* to *All-hollantide*, their Well-Water has ſuch an earthy ill Quality, as renders it unfit to brew with; becauſe the ſtrong Beer made of it won't work, inſomuch that they have been forced to brew it over again, though all the reſt of the Year it is pretty good. Yet, by way of Security, they are forced to boil their Wort ſeveral Hours, elſe it will ſtink in a Week or two's Time. This Town joins to the Salt Water.

IV. *Of the* Winter Quarter.

Now Water by Cold becomes of ſomewhat a thicker Body, ſo that, though it is in its utmoſt Heat, yet is it not ſo capable to enter the Pores of the Malt and waſh out its Salt and Oil, as when us'd in a more temperate Seaſon. The ſame Effect alſo the cold Air has on the Malt to reſtringe and keep back the Emiſſion of its Virtue; for which Reaſon at ſuch a Time, the Water ſhould be uſed in the higheſt Degree of Heat the Nature of the Malt will admit of. To do which there conſequently muſt be a greater Evaporation of Steam, which certainly is very prejudicial to the Drink; becauſe the Vapour of the Water is no leſs than the lighter, purer, more ſubtil and penetrating Part of it, that ſhould enter into the ſmall Pores of the Malt, and there, by its attenuating Particles, open, dilute and waſh the Oil out of its tenacious mealy Body. From whence it is plain that there is a great Expence and Loſs of the Water's finer Parts by the Steam, to the Prejudice of the Drink; and though it is a general Practice to brew without having any Regard to this ſerviceable Management, it is nevertheleſs true, that this Obſervation

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is moſt valuable, and by all Means ſhould be obſerved with the greateſt Nicety by all Brewers whatſoever. This Seaſon greatly retards Fermentation, as the Summer forwards it too much.—Therefore a prudent Brewer will now avoid this Work as much as he can, and be the more cautious in guarding what Wort he is neceſſitated to make, from the Danger of this Extreme.

CHAP. II.

The State of Barley *for the Year* 1737.

THIS Summer 1737 being a very dry one, and attended with a wet Harveſt, that Barley, which was ſown early in *February* and *March*, got ſo ſpeedy a Cover, that with the Help of the Dews it grew apace, and prov'd an excellent Crop; but that which was ſown later, in *April* and *May*, as bad. The firſt Shoot and Ear was of a large Size, the laſt produced a little Shoot and ſmall thin Kernel; inſomuch that this, and that which ſprouted in the Field by Rain, after it was mown, would not make Malt; which occaſion'd a Perſon of good Judgment to ſay, that he verily believ'd, every tenth Corn never ſpired on the Floor, but remain'd Barley to the laſt. Nay, it was reported, that ſeven Quarters of theſe underling Kernels were ſifted out of a large Quantity of Malt, which in a manner prov'd all Barley, and fit for little elſe but to grind and fat Hogs. So that many muſt conſequently have ſuffer'd a great Loſs (the ignorant Buyer eſpecially) both by Meaſure, Tax, Making, and above all by the Diſappointment of Brewing good Drink; for that there has not been ſuch a Seaſon theſe ſeven Years paſt for bad Barley. This therefore is to inform all Farmers, and others who are Sowers of Barley, of that incomparable and invaluable Reeeipt, for the Improvement of this Noble Grain, publiſh'd in the *Practical Farmer*, p. 25, which ſhews a new Method how to ſteep Barley Seed in a certain cheap Liquor a Night and

and a Day, and then to lime and ſow it: A Receipt firſt invented at *Paris*, but perfected in *England*; which will cauſe it ſo to branch as to bring on a Cover at once, and ſecure the Crop throughout the Summer, in a flouriſhing Manner, with little more than the Help of Dews, and alſo give the Barley a fine even Body, an exalted Virtue and a great Increaſe; as he himſelf yearly proves, and which no Sowers of Barley ſhould be without, becauſe even in later Seaſons, on Chalks, Gravels and Sands, the Ingredients will bring on a moſt fertile Cover and Growth. In the ſame Book are contain'd many more practical, valuable Secrets never before publiſh'd, and ſold by the Bookſeller hereof.

CHAP. III.

Of Malt-Kilns.

THE Plate-Kiln, and the Tile-Kiln, which are full of ſmall Holes, were invented to dry brown Malts, and to ſave Charges; becauſe in both theſe they uſe no Hair-Cloth, but dry three Kilns of Malt in leſs than twenty Hours. Theſe I cannot commend, by reaſon the Ends of the Corns are apt to pitch and lodge in the Holes, and there are parched or burnt, when ſome other Parts of the Malt's Body will be in another Condition. So likewiſe is it with the Wire-Kiln, which is alſo worked without the Hair-Cloth; but then the Kernels are apt to lie between the Wires and be ſcorched too much. However, theſe all anſwer their Ends in making a high colour'd Malt to pleaſe the *Londoner*, eſpecially, with their blood-red Drink. The next is the Free-ſtone Kiln, one of the beſt Sort of all for drying pale Malt, either with Coak, *Welch*-Coal, or Straw, *&c.* and generally is at leaſt twenty Hours in drying off one Kiln. Its common Dimenſions are twelve Feet ſquare, laid with four Rows of Stones, three Feet wide each Stone, or with more if leſs, containing many Holes, each being as

as broad again at Bottom as at Top, over which a Hair-cloth lies; theſe Stones lie on common flat Iron Bars, ſupported by common ſquare upright Iron ones, and is now more and more in Uſe. I have alſo ſeen another very profitable and ſweet Method of drying brown Malts, exceeding all the Wire, Plate, and Tile-Kilns, perform'd by the Help of four caſt Iron Plates, of about an Inch thick or ſomewhat more, and near three Feet ſquare, with which they burn *Newcaſtle* Coal, and convey its fulſome Smoke through a Flew or Funnel, ſo that the Malt is dried very leiſurely, and in a pure Condition, by the Heat contained in the ſeveral Pieces of caſt Iron; which at firſt was invented to ſupply the Place of the Iron Pipes that dried Malt by hot Air, at a very chargeable Rate; but this is a very cheap Way. Now as there are various Sorts of Fuels and Kilns to dry and cure Malt with, there are alſo diverſe Fancies and Opinions concerning them. Some will uſe no Drink made from *Welch* Coal, alledging it has a diſagreeable Tang from its ſulphureous and ſmoaky Vapour. Others argue the ſame, on Account of Coak or Cinder. Others object againſt the ſmoaky unpleaſant Taſte of Drink made from Malt dried with Wood; while ſome again are Advocates for it, and prefer it to all others; ſo that the Cuſtom of the Place in a great Meaſure carries it. However, there is too much Truth in this, that was ſaid by a judicious Maltſter, in a famous Town where there is reputed to be above twenty of them; That not above ſix of that Number were Maſters of their Buſineſs. But, let them underſtand the Art ever ſo well, and practiſe it with the moſt advantageous Conveniencies, yet none can come up to the Help of Flews, or Malt dried by the Sun alone, through a ſufficient Number of Glaſs Windows in a proper Situation.

CHAP.

CHAP. IV.

Of Fuels *for drying the ſeveral Sorts of* Malt.

WOOD.

THIS Article I think myſelf obliged to reaſſume, although I have already wrote on the ſame in my former Treatiſe; becauſe I have ſince ſeen different Ways of performing the Drying of Malts. There are many Maltſters where Wood is plentiful that uſe this Fuel, as being the cheapeſt they can have for their Purpoſe, and is generally of but two Sorts, *viz.* The *Oak* and the *Beech*. The firſt, as it is of a very hard and durable Subſtance, they lay up in great Piles or Cocks to dry, and waſte the ſappy phlegmatic Part of the Wood; ſo that, when they come to uſe it, it will the ſooner run into Fire, and conſequently leſs Smoke, whereby the Tang or Vapour of it does the leſs Harm to the Malt. And ſo careful are they in this reſpect, that ſome will keep the *Oak* Sort ſeven or ten Years by them before they uſe it. But as the *Beech* is a Wood that much ſooner decays, they only pile it abroad one Year, and take it into the Malt-houſe next, ſo that two Years fit this for Uſe. And to make it anſwer better, many in the Weſtern Parts burn Coak with this, or *Oak*, and thus make it run ſooner into a clear Fire, and leſs into Smoke. The Roots alſo of the *Oak* by ſome are preferred, becauſe of their ſoft Nature and quick Burning. So the *Aſh* Billet is eſteem'd a valuable Fuel, but this is ſcarce in moſt Places. With this Fuel of Wood, they generally dry their brown Malt.

COAK.

THIS conſequently has leſs Sulphur or Bitumen in it than the *Welch* Coal or Culm, provided it is carefully cured in the Oven or Burning-place. For, in the Management of this, there is a conſiderable Difference, which makes them ſay, that the Coak, made at the Coal-pits, much exceeds that made elſewhere; becauſe there they burn it in larger Cakes than they do in other Places,

for

for the ſmaller it is burnt the worſe it is. However, to make this go the further, many, as I have obſerv'd, lengthen it out with *Oak* of ten or fifteen Years old, which they burn together in a fixed Grate; for by this Age ſuch Wood comes near Charcoal, which is the beſt of Fuel, and which undoubtedly would be moſtly uſed for drying Malts, could it be afforded; becauſe nothing is more detrimental to Malt than Smoke; and though the Wood of *Aſh* yields the whiteſt Smoke, yet will ſuch ſooty Vapour tinge the Malt with a high Colour. With Coak they generally dry the Malt uſed for brewing Ale; for, if this is truly cured, it certainly has leſs Sulphur in it than any *Welch* Coal or Culm; and therefore the Drink made from ſuch Malt may be uſed much ſooner than that from Coal or Culm, which requires at leaſt nine or twelve Months Age, to overcome the ſulphureous Tang of ſuch Malt. Yet is this Coak alſo uſed by many to brew their *October* or keeping Strong-beer with, as an excellent Fuel, as was proved by its Effect in the Butt-pale-beer, ſold at the *Half-moon* in *Warminſter*, which was the fineſt I taſted upon that Road, and frequently ſent to *London* for Preſents, being brewed with a hard Water, of a white maumy Rock, that, on Taſting, ſeemed to me more briſk and ſpirituous than any I ever drank; which, I think, is eaſily accounted for: For, upon Examining into the Nature of this Earth, I underſtood it to be a ſtrong Sort of Chalk, well ſtored with Alcalous Salts, which conſequently gave the Water a ſuperior Strength, as it did the lean, white, yellow, and red, ſandy Land, it was laid on; for with this ſame Maum (not Marle) they dreſs and manure their Ground many Miles about this Place, and are forced for this Purpoſe, to dig it out of Pits, and not out of narrow Places like Wells, as we do the ſoft Chalk, becauſe this Sort is too brittle for ſuch Confinement; and out of theſe Pits they take great Pieces, that they carry into the Fields, where they break it ſmall with a Sledge, and, after a froſty Winter, it becomes ſo fine, as to mix with the Earth; and ſo enriches it, that for ten Years together, there need no other

other Aſſiſtance; it being a Rule here, that the harder the Maum, the ſtronger Nature it is of, and then it is thought to do double the Service of ſoft Chalk. In ſhort, Coak by many is preferr'd to *Welch* Coal or Culm, by reaſon it is leſs prejudicial to the Liquor; for the leſs Tang it has the more agreeable it is to the Palate.

Welch Coal, Culm, *or* Stone-Coal.

By all theſe Names this Fuel is known in diverſe Parts, and though it comes only out of *Pembrokeſhire*, yet is there a great Difference in its Nature. One Sort, on holding a Piece againſt the Sun, will appear in ſhining golden Streaks, occaſioned by the greater Quantity of Sulphur, that it is impregnated with more than others, and leſs of the Bitumen or pitchy Part; ſo that this is ſaid not to ſmoke at all, and therefore makes the fineſt of Pale Malt; whereas all other Sorts that appear of a ſolid, ſhining, jetty Black will ſmoke more or leſs. This Coal or Culm is dug up at *Milford*, *Haverford-weſt*, *Tenby*, and other Places in the County of *Pembroke*: But none is ſo much in Eſteem as the golden-ſtreaked Coal of *Tenby*, which is endowed with ſo much Sulphur, that, in the Ships that come from thence, they can hardly bear the Room it is burnt in, and at *Briſtol* is ſold for eight Pence a Buſhel, where they are in no ſmall Concern for this Sort of Coal, becauſe its great Uſefulneſs has of late encouraged them to dig ſo much out, that their Mines at this Place are almoſt exhauſted, and which in a few Years they are like to ſuſtain the Loſs of. At a famous Town in the *Weſt* for brewing Beer, they burn this *Welch* Coal in a moveable Iron Grate with four Wheels of about ſix Inches Diameter each, called there a *Waggon*, being eighteen Inches high, as much over, and three Feet long, to wheel out when they turn the Malt on the Kiln, leſt the Brimſtone Vapour of the Fire ſuffocate the Workman. In this County they diſtinguiſh one Sort from the other, by calling the biggeſt Stone-coal, and the ſmaller Culm, which latter many in *Wales* work up with Clay and Water, to the Bigneſs of a Cannon-Ball, and then it

will burn in Grates, but the Stone-coal will not without ſome Cover to keep it from the Light.

Wheat Straw.

THIS Fuel, tho' it is one of the moſt ancient Sorts, ſtill keeps its Reputation, ſo that when it is in due Order, and managed by a ſkilful Hand, none exceeds it for drying of both pale and brown Malt, for Brewing either Ales or ſtrong Beers: Becauſe, I ſuppoſe Wheat-ſtraw to be in a thorough dry Condition when it is uſed, and a Fuel the moſt free of Salts and Sulphur of all others; as is plain from its Aſhes, which are the leaſt efficacious of all others, when laid on Meadow or ploughed Ground, as I have duly proved. From hence it is that the Smoak of this ſweet Fuel is ſo little prejudicial to the Malt, and I muſt own, that, in all my Travels, I never taſted any Malt-liquor more pleaſant than that dryed with Wheat-ſtraw, which when rightly imployed, free of Weeds, under a Free-ſtone Kiln in particular, is inferior to none; as it is commonly done at *Lavington* in *Wilts*, and other Places. But this delicate Fuel is refuſed by many for two Reaſons; Firſt, becauſe it is ſomewhat dearer than ſome other Sorts; Secondly, becauſe it requires the Care of two Men to a Kiln; for here the Fireman is obliged to give ſuch a cloſe Attendance that he cannot leave his Place to turn the Malt; whereas, with Wood, Coak, or Coal Fuels, the Fireman can do both. Which leads me to take Notice of what, in my humble Opinion, is a Miſmanagement in ſome Brewers who for Cheapneſs ſake will buy Wood-dried brown Malt, commonly made on Kilns without a Hair-cloth, for brewing the common Butt Brown-beers, ſometimes at ſixteen Shillings *per* Quarter, when the Pale Sort is at two and twenty Shillings, or four and twenty Shillings. As believing the ſmoaky Tang, by Time and the great Quantity of Hops, will be overcome. But I have known many Inſtances, where the Hop has overcome ſuch Drink by the ſmallneſs of its Body. And no Wonder ſuch blood-red Beer has more Colour than Strength, ſince the Brewer, by the low Price he will have the Malt at, forces

the

the Maltſter to make it accordingly; and then he ſo blows up the Kernels by the Vehemency of the Fire, that, by that and the Help of the Malt Tails, he fills the Buſhel with a great deal of Show and little good Malt; inſomuch that I have heard of a Maltſter who gave thirty Shillings a Quarter for his Barley, and ſold his brown Malt at but twenty-five Shillings, by Means of the great Increaſe he was this Way obliged to make, to balance the Brewer's low Price. For it is a common Saying, that there is brought to *London* the worſt of brown Malt, and the beſt of Pale.

CHAP. V.

Of the Great Common Brew-houſe.

THE Improvement which has been made of late Years in this Brew-houſe are many, inſomuch that four Men's Work may be done by two, and as well, as I ſhall make appear by the following Diſcourſe; and firſt of the Situation and Building of a Brew-houſe. This in its full Conveniency is certainly of great Importance towards obtaining good Malt-Liquors; for this Purpoſe, where it is to be erected independant of any other Building, in my humble Opinion, three Sides in four of its upper Part, or ſecond Floor, ſhould be built with Wooden Battons about three Inches broad, and two thick, according to the preſent *London* Mode; which by its many vacant ſquare Holes admits ſufficient Air, and ſeldom too much Sun; ſo that the Backs or Coolers by this means have a quick Opportunity to cool a thin laid Wort; eſpecially, if the Wall's farther Side ſtands to the *South-weſt*, where the Copper is to be fixed with an Arm near the Bottom of the ſame, and a large Braſs-cock at its End, to diſcharge with Expedition hot Water into the Maſh-tun, and Wort into the Coolers. For this Purpoſe, its Bottom ſhould ſtand about ten Feet above the common Level of the Street-ground, whereby is

prevented in ſome Degree the Cooling of the Water and waſting of the Wort; for now the tedious aſcending Motion of the Pump is avoided, and the Charge of that and Man's Labour ſaved. But beſides the great Copper, there is commonly, in a large Brewhouſe, a leſſer one; if the firſt holds twenty Barrels, the other may contain eight: The large one for boiling brown Worts, the leſſer one for Amber and Pale-Ales. In former Days, if there were two Coppers in a Brewhouſe, they were at ſuch a Diſtance, that it might be properly ſaid, there were two little Brewhouſes near one another, which obliged the Maſter to have a Man to attend each Copper. But the preſent Contrivance excels the old one, and theſe two Coppers are now ſo erected that each Fire-place is within Feet of one another; ſo that one Stoker ſupplies the two Fires and Coppers, which ſaves the Wages of one Man, that uſually amounted to near thirty Pounds a Year; beſides having them now under a more immediate Inſpection of the Workman Brewer.

The ſecond Improvement that has been made is alſo of conſiderable Service, and that is by grinding the Malt directly into the Maſh-tun; which is performed by the help of a long deſcending wooden cloſe ſquare Spout or Gutter, that immediately receives it from the high fixed Mill-ſtones, and conveys it into a cover'd Maſh-tun, that thus effectually ſecures the light Flour of the Malt from any Waſte at all; whereas formerly they uſed to grind it into a great, ſquare, boarded Place, which lay lower than the Maſh-tun, commonly called a *Caſe* or *Bin*: From hence it was taken out with two Baſkets and put into the Maſh-tun, to the Loſs of ſome Quantity of the fineſt Flour of the Malt, that would fly away and make a Lodgment on the Men's Cloaths, and the adjacent Places. But now the Charge of building and repairing the ſquare Caſe is altogether ſaved, its Room put to ſome other Service, the Expence of Ropes and Pullies ſunk, and the two Men's Time converted to other neceſſary Uſes in the Brewhouſe.

The third Improvement is the Water-pumps. Theſe

formerly were erected in a Brewhouſe for the convenient Conveyance of Water out of the Reſervoir and Well; the Former for the New-River, and the Latter for Spring-Water. They were work'd with long Iron Pendant-handles with a large Knob of Lead fix'd to their Bottom Ends for the greater Eaſe of Men's Labour: But the preſent Contrivance works both theſe Pumps with more Expedition by a ſingle Horſe put into the Malt-mill, and that in as true a Manner as any Men whatſoever; which ſaves great Part of a Man's Wages.

The fourth Improvement is by the Wort-pump. This uſed to be work'd with a long iron Handle as the Water-pump was, but is now likewiſe ſupplied by the Horſe-mill in the ſame Manner that is, and will with great Expedition throw up the Worts out of the Under-back into the Copper.

The fifth Improvement relates to the Backs or Coolers, which are certainly more conveniently placed in a great Brewhouſe, than in the private or ſmall one; becauſe, in many of the former, they have full room to lay them on a ſingle Stage or Story. To each of theſe is faſtened a leaden Pipe about an Inch or two Bore, with a braſs Cock at the End, that diſcharges the Wort at Pleaſure into a ſquare or round Tun; beſides which is alſo another Hole about four Inches Diameter, fill'd with a wooden Plug, whoſe Uſe is to let out the Dregs ſwept through it into a Tub under the ſame, to be ſtrained by a flannel Bag faſtened to a Barrel-Hoop, and the clear Wort thus ſtrained is mixed with the reſt. This leads me to obſerve the Misfortune that I have ſeen ſome labour under, who, being confined to a narrow Space of Ground, run into Brewings of great Quantities of Drink, which obliges them to build three Stages of Backs one over another, that often occaſions their Worts to ſox, or damage in ſome Degree, by the long Heats the under one ſends upwards, ſo that the flat Planks are made hot both at Bottom and Top, and thereby deprived of one of the principal Conveniencies in Brewing, a due Freedom of Air, which a ſingle Stage ſeldom ever wants.

By means of the Copper Arm, the Worts now run ſwiftly into a ſingle Teer of Backs, that formerly uſed firſt to be emptied by a Pump placed in the Copper, and thrown up into a little Back, juſt over it, from whence it ran out into the great Backs; and if there were one or two Teer more, the Wort was conveyed into the ſame by a ſmall wooden Pump placed in the Copper-Back. This better Management ſaves the Loſs of a great deal of Time, Waſte, and Men's Labour. Theſe Improvements, and many others that I am ſenſible of, raiſed my Surprize to ſee ſeveral great common Brewers, in ſome of the *Eaſtern* Parts of *England*, brew ten Quarters of Malt or more at a Time in a Maſh-tun, placed almoſt cloſe to the Ground, the under Back deep in it, expoſed to the Fall of Dirts, Drowning of Inſects, and other Foulneſſes. The open Copper alſo a little above the common Level of the Earth, the Coolers in a proportionable Lowneſs. And to make up a compleat Miſmanagement, they brew moſt of their Four-penny Ales after their Six-penny Beers: So that you can have no mild Drink here, but what taſtes of the earthy Parts of the Malt and Hops to ſuch a Degree that I was commonly forced to be at an extravagant Charge, and mix ſome Ingredients with it, to correct its unpleaſant Taſte and unwholeſome Qualities.

CHAP. VI.

Of the Private Brew-houſe.

BY this Name, I would be underſtood to mean all ſuch Places that are occupied and ſet apart for Brewing Malt-Liquors for Gentlemen, Tradeſmen, and others own particular Uſes. A Matter of Pleaſure, and Profit enough in my humble Opinion to induce an *Engliſhman* to love the Production of his own Country, and prefer it to thoſe of Foreigners; becauſe, by this Opportunity, every one may be Maſter of his own Fancy, have his Utenſils in the beſt Manner he thinks fit, chuſe his own Malt, brew when he will, and what Sort he likes beſt.

beſt. Here he may enjoy his leiſure Workings and light Fermentations; in ſhort he may here act the abſolute Governour, and brew his Drink after the beſt Rules and Inſtructions. And when Malt-Liquors are thus made according to the neweſt Improvements, in my Opinion, there will be leſs Cauſe than ever of gratifying our Palates with adulterated Wines, at the Riſque of our Healths and Expence of our Pockets. In Order then to come by ſuch ſalubrious Drink, it is truly neceſſary in the very firſt Place to be Maſter of a convenient Brew-houſe; for, without this, it is but a loſt Attempt to get right Malt-Liquors. And here the Caſe admits of two Suppoſitions; Firſt, whether ſuch a one is to be had by Choice; or, Secondly, of Neceſſity: If by the Firſt, then the *Northern* Part claims the Preference for Shade and Coolneſs, that are of Importance in this Affair; but if by Neceſſity, then the Caſe allows of no Diſpute: However, where it ſo happens, that the Brew-houſe can be near the Cellar, it will ſave a great deal of Time, Charge, and Labour; becauſe then the Drinks are ſooner, eaſier, and ſafer convey'd into it; but more where it can be carried by the Leather-pipe from the Tun, Cooler, or Starting-tub into the Caſk; as is now done by ſome of the abler Sort.

And obſerve that the Arm and Cock are not confined altogether to a raiſed Copper in a great Brew-houſe; for in a Private one, this is alſo abſolutely neceſſary, even though the Copper is confined to ſtand as near the Ground as poſſible; becauſe both the hot Water and Worts may be drawn off quicker, and ſafer from any Danger of Scalding and Wetting, that the common plain Copper very much expoſes a Perſon to, who is obliged to empty by Scoop, Pail, or Hand-bowl; which is a Conveniency of no ſmall Moment, if we conſider the many Diſaſters that have befallen this hazardous Method; beſides the Time, Wear, and Tear, which are here likewiſe ſaved.

In private Brew-houſes, there is ſeldom Room enough to be had for thoſe neceſſary Conveniences, Square-

backs; or, if there is, the Charge is often grudged, or at leaſt can't be afforded; but where it can, it is wrong to want them, becauſe theſe are the chief Securities againſt fox'd, ſour, and foul Malt-Liquors; for here it is that the Sediments muſt be firſt left behind, and the Worts cooled at Diſcretion; for it is certain that the ſhallow Back can diſcharge the Wort finer than the Tub, as being fixed in its Place and never diſturbed while the Worts are running off; whereas Tubs muſt be removed to pour the Drink clear from the Bottoms, or elſe the Hand-bowl muſt be gently uſed, which in ſome Degree will likewiſe diſturb ſome Part of the groſs *Fæces* or Bottoms. Theſe Backs in the great *London* Brewhouſes are generally made with the Heart of *Oak*; but in moſt Country Towns, they may make them of *Deal* or ſome of the aquatic Woods at an eaſy Price. But then, as I ſaid before, theſe Coolers are of but little Service where they are placed too cloſe to one another, becauſe one heats the other, and often charrs the Wort; as I and many others have too much Reaſon to complain of: For when I travelled the Road in 1737, at ſeveral Towns, I could have no other than foxed Ales, and thick unwholeſome ſtale Beers, which made me aſk a great Inn-keeper, who was his own Brewer, why his Malt-Liquors were in ſuch a bad State? His Anſwer was, that all the Summer Time it was commonly ſo, but good in Winter. This induced me to inſpect his Brewhouſe, where I found his Copper, Maſh-tun, and Coolers, as near as they could be together; his Under-back or Receiver deep in the Ground, and Part of it in the Way of the Dirt of Shoes and other Naſtineſs to fall into; his two ſquare Coolers fixed about eighteen Inches one above the other, and all in a ſmall narrow Place; ſo that this Perſon was ſeldom or never clear of fox'd or prick'd Drinks in ſome Degree: Though in Winter his Ignorance made him believe they were ſound brewed, becauſe the Taint was then not ſo much as in Summer.

The Maſh-tun here ſhould be as ſmooth within-ſide as if it was turned; becauſe ſuch an Utenſil is not ſo

apt

apt to furr as another made out of a large Wine-caſk, whoſe Staves, being uneven within-ſide, give room for a Lodgment of the Remains of Worts, which fail not to become of an acid Nature, and corrupt the next pure Worts, if not thoroughly eradicated. And indeed all Tubs, Pails, and Jetts, uſed in Brewing, ſhould be of the ſmooth Sort. Of this, ſome are ſo curiouſly nice, that if by Accident one of them happen to be dipt into cold Water, they will ſcald it anew, and dry it before it is made uſe of. This ſmall Maſh-tun has ſeveral Forms belonging to it for diſcharging its raw Worts into the Receiver or Under-back. One is by a Cock faſtened in the Bottom, over which is another called a *falſe* Bottom, and is the beſt Way of all others; becauſe, by this, you may ſpend off the Wort very eaſy, ſafe, and fine, free of any Danger from the Stoppage of Malt. The Second is by a Braſs Cock, fixed in the Side near the Bottom to a Tap-whips within-ſide. The Third is by a long wooden upright Plug, ſurrounded by a high Baſket Strainer that ſtands almoſt in the Middle of the Bottom. The Fourth and laſt Way, I think a bad one indeed, and that is done by a Spiggot and Foſſet, which I have ſeen many uſe: Here when they draw off the Wort from the Malt, they put a Birchen Twig into the Tap to adjuſt the Stream; but ſometimes the Weight of the Wort forces out the Spiggot, and then the Current alters to the Fouling of the Wort; to ſtop which the Fingers muſt be employed to put in the Twig tighter, and ſo expoſe them to a ſecond Scalding.

The Floor of either a great or ſmall Brewhouſe is juſtly deſerving of ſome Conſideration, as it is always more or leſs ſerviceable by its good or bad Condition; for this, like a Dairy-Room, ſhould have all the propitious Allowances given it that can be, towards keeping it dry, ſweet, and cool; and therefore ſuch a Floor ſhould always be laid ſomewhat higher than the common Level of the Ground; or with ſuch a gradual Declination, as may bring away all Wetts and Slops, that conſequently muſt often happen in ſuch a Brewhouſe; for, if it

was

was otherwiſe, and Water and Worts were permitted to make Lodgments in Holes or hollow Places, there muſt in courſe be produced corrupt and foul Puddles, whoſe ill Scents and naſty Daubings are always ready to affect and damage the Utenſils and Worts. For this Reaſon, all boarded and planked Floors are to be rejected, as they are obliged to be laid hollow on Joiſts and Sleepers, that will ſurely rot them in a little Time, and create unwholeſome Stinks and Vapours; beſides the great Danger that attends ſuch a wooden Floor in its Slipperineſs when wetted, that expoſes a Perſon to Falls as he is carrying ſcalding Worts or Water; and alſo when two Men may be under the heavy Burden of a Barrel of Drink on the Slings, that weighs near 400 Pounds, which may occaſion the Loſs of their Lives. An Inſtance of this Folly I knew once happened to a common Brewer in *London*, who thought it the cheapeſt Way to have a boarded Floor in his Brew-houſe, and accordingly bought *Oaken* Ship-Planks at *Chelſea*, for that Purpoſe; but the Conſequence was, that in a little Time he repented himſelf of his Miſtake, and had it laid with the broad *Portland* Stone.

CHAP. VII.

Brewing a Butt of pale Strong-Beer, *by an Inn-keeper.*

I Have my Malt juſt broke in Grinding, to prevent my having foul Drink by the Mixture of its fine Flour in too great a Quantity, which I let ſtand in Sacks by the Maſh-tun ſide, ready to be put in after the Water that is now heating in a Copper, holding a Hogſhead and a Firkin under a cloſe Wooden Cover to keep in the Steam, where it is to continue till it is ready to boil. In this Condition, a Hogſhead of it muſt be put immediately into the Maſh-tun, and, as ſoon as poſſible, a Pail of cold Water in that, to qualify it (though moſt others venture to mix this tough Malt with it in a boiling

boiling Heat) for receiving ten Buſhels of Malt, that I put in very leiſurely, whilſt a ſecond Perſon ſtirs it with an Oar or Paddle, as it runs out of the Sack, without any further Maſhing throughout the Brewing of Strong-Beer or Ale. Then immediately, with my Oar, I make room about the Baſket upright Strainer for the ſifted hully Part of one Buſhel more of Malt, which I lay round it as cloſe as I can; and the Flour thereof I ſpread over the Top, beſides a ſingle Buſhel of Wheat-Bran over all that; here it is to remain three Hours in Winter, and two in Summer. At this Time, I have a Firkin of hot Water left in my Copper, to which I add a Barrel of cold to make it up forty-five Gallons; This I heat away, and make it juſt ready to boil againſt my firſt Wort comes off the Goods; which when it is fit to do, I looſen my Plug and ſpend it off by a ſmall Stream on one Pound of rubbed Hops, returning firſt what comes foul till it runs clear: Then I make uſe of my hot Water in the Copper, and leak it over the Goods by a Jett, or three Hand-bowls at a Time, letting that almoſt go off before I put on more; and ſo continue till I have a Hogſhead and ſix Gallons of Wort, which will about empty my Copper; for, in this Caſe, I allow near a third Part of the Water's being drunk up by the Malt never to be returned, and ſometimes more than the Waſte of one eighth Part for the Wort's boiling away. As ſoon as this is done, I rub three Pounds of Hops more, with near a Quarter of an Once of Salt of Tartar, and throw all into the Copper. At this Time I have another Copper, that holds a Barrel of Water, now boiling hot, which I lade over the Goods by degrees as before, 'till I get a ſecond Wort off for making me half a Hogſhead of Ale, that I ſell within Doors for four Pence a Quart. In the mean Time, I boil my Copper of firſt Wort, 'till all the Hops ſink, which is the Sign of its being enough, without ſtaying for the Wort's breaking or curdling; accordingly I ſtrain it, and let it lie very ſhallow in Coolers. By this Time, I receive a Barrel of ſecond Wort off, having here as much Wort returned as the Water that went in. This I

boil

boil with all the Hops that came out of the Firſt, till it breaks, and then ſtrain it into Coolers; obſerving to ſupply the Grains with a Hogſhead of cold Water as ſoon as the ſecond Wort comes off; which after it is ſoundly maſhed, and has lain three Quarters of an Hour, I draw off, and boil it without any Hops a Quarter of an Hour; then I diſcharge it into my Coolers, to be heated next Morning and uſed inſtead of the firſt Water which is call'd *Doubling*, for Brewing eleven Buſhels more of Malt in the ſame Manner the laſt was done; only with this Difference, that, when at laſt I maſh up with cold Water for Small-Beer, I put only ſo much on as will bring me off thirty-four Gallons, for making me half a Hogſhead in my little Copper, with the Hops that I us'd before.

Obſervations on the ſame.

The common Method of having but one Copper to one Maſh-tun, has too often proved the Inconveniency of it by the bad Effects of Beers and Ales made from the ſame, which are often, in Summer eſpecially, prick'd or ſour'd on the Grains, by the Length of Time they are obliged to allow for the ſeveral Maſhings and Soakings of the Malt or Goods in the hot Waters; and if the Misfortune ſeldom amounts to this Degree of Damage, yet it frequently happens that the Wort, leſs or more, is in an unhealthy and unpleaſant Condition; which to avoid, I would adviſe every one that has a Conveniency to have two Coppers to one Maſh-tun. In this Caſe I addreſs myſelf to all except the great Brewer, who, though in my humble Opinion he has moſt need of it, yet, by long Cuſtom being uſed to his ſingle Utenſils, I can hardly ſuppoſe he will alter; but I hope ſome of the ſmaller Sort will have regard to this Item, as a Method that certainly muſt be very uſeful, in giving them an Opportunity to enjoy a fine ſweet Wort: For it is generally allowed, if the Wort goes into the Copper in a bad State, it will come out ſo, and never receive a true Cure, as being damaged in its firſt and beſt Condition. Now whether the Tun has a falſe Bottom, or a Baſket and Plug, or a Braſs Cock

near

near the Bottom; the Form hinders nothing of this Benefit: For if you brew with the falſe Bottom, by Maſhings and not Leakings over, then, as ſoon as your firſt Wort is ſpent off into the Under-back or Receiver, you are to run off your hot Water out of your Copper into the Maſh-tun for a ſecond Wort; and directly get the firſt Wort into the ſame to boil: Now as this your ſecond Wort will come off the Goods, half an Hour at leaſt, before the Firſt is ready to go into the Coolers, here happens too great a Vacation of Time, that may chance to prejudice it, by thus being neceſſitated to let it lie out of the Copper ſo long, which a ſecond Copper prevents by receiving and boiling it away directly. And as to the Maſh-tun, that diſcharges its Wort by Plug or Cock without a falſe Bottom, this ſecond Copper is rather more ſerviceable, becauſe, your firſt Wort commonly lying two or three Hours with the Malt, Part of the ſame Copper which follows will be expended in Leakings over to make a compleat Copper of the firſt Sort: Then if you have but one Copper, there can be no hot Water made ready as it would be for a ſecond Wort, till the firſt is boiled off, and that will take up near two Hours; all which time the Goods muſt lie idle, and very likely prick or ſour. Otherwiſe you muſt hop the firſt Wort, and put it by into Tubs till the ſecond is boiled, which will conſequently by this loſe ſome of the Hop's Spirit, and the purer ſofter Part of the Wort, *&c.* But if you have a ſecond Copper of hot Water ready, when the firſt Wort is put into the firſt Copper, the Danger of theſe Misfortunes will be intirely avoided.

Secondly, The Heat of the Water, as I have more amply remarked in my two former Treatiſes on Brewing, ſhould be in a greater Degree for Pale than Amber and brown Malts.

Thirdly, The Maſhings alſo, for Reaſons I have formerly aſſigned, ſhould be as little as poſſible, ſo as the Malt is kept from Balling.

Fourthly, The Steam of the Water ſhould be kept in, as I have before accounted for.

Fifthly, The putting the hully Part of a Buſhel of Malt round the Baſket, is what never was expoſed in Print before, though it is an excellent Way towards obtaining a fine current of Wort, that gives a Benefit to the Liquor, even to the laſt.

Sixthly, The Rubbing of the Hops with Salt of Tartar is likewiſe a new Method of great Service, in forcing the oily Part of the Hop to emit its viſcid Quality, and expeditiouſly join in Contract with that of the Wort: For by this, the fine floury Part of it may be obtained, clear of the earthly Phlegmatic, which long boiling never fails of extracting, to the great Prejudice of the Beer and its Drinker's Health. A Proof of it is evident from the ſmooth pleaſant Taſte that ſuch Malt-Liquor receives from this Management, and which of late is in ſuch Eſteem, that I know a Collector of the Cuſtoms, who boils his Hops but five Minutes, which certainly would be too little a While to get a ſufficient Tincture from them, was it not for the penetrating and attenuating Nature of this Salt, whoſe Virtue is not only valuable on this Account, but alſo for fining and preſerving the Drink afterwards. And though the common Criterion or Sign of the Wort and Hops being boiled enough, is by this Inn-keeper and many others obſerved to be when the Hops all ſink; yet I think he is wrong in not boiling the Wort longer than the Hops, becauſe I am ſure the Drink won't be ſo ſoon fine in the Barrel, as that boiled till it breaks or curdles.

Seventhly, As to the Boiling a Hogſhead of ſmall Wort at laſt, to ſerve as the firſt Water or Liquor to be uſed in the ſucceeding Brewing, the ſame or next Day, it is a good Way; becauſe it adds to the Strength of the next Liquor, and conduces to preſerve it ſound the longer. But, before I conclude theſe Obſervations, I muſt take Notice of an egregious Abuſe that this Inn-keeper and moſt others are guilty of, by brewing their common Ale from the Goods of the firſt Wort; a Misfortune that is moſtly known to Travellers by woeful Experience: For, in many Parts of the Nation, there is no other mild Sort

to be had, and then a Man is obliged to ſwallow ſo much Dirt of the Malt and Hops, that he muſt have a ſtrong Conſtitution to overcome its dire Effects.——So alſo with the ſame Reaſon I obſerve, that when theſe Butt-Beers are loaded with Hops, without a ſufficient Strength in the Drink to ſheath their acrimonious Points; ſuch Liquor I ſay muſt conſequently be very injurious to weak Conſtitutions, whoſe Stomachs are leſs able to bear their Sharpneſs; and what is worſe, it muſt go very hard with ſuch, when, on a Road, they are ſo unfortunate as to be confin'd to ſuch Liquor in a Publick-Houſe, which perhaps is the only one in the Village.

CHAP. VIII.

Brewing a Hogſhead and a Half of Pale-Ale *from freſh* Malt, *by a private Perſon.*

AS my Copper holds a Hogſhead and a Firkin, and I am to brew twelve Buſhels of Malt, I charge it full of Spring-Water, which I heat till it is juſt ready to boil, but not boil: This I put into my Maſh-tun, and run ten Buſhels of Malt very leiſurely on the ſame, keeping it all the while ſtirr'd by a ſecond Perſon; which when it is ſufficiently done, I cap with the eleventh Buſhel, and let it ſtand while I get another Copper full of boiling Water as faſt as I can; twenty-four Gallons of which I put into my Tun and maſh up, covering all with the twelfth Buſhel. Then I immediately add eighteen Gallons of cold Water to thirty-nine of hot left in the Copper, and get it into a boiling Heat againſt all my firſt Wort comes off; which, after it has ſtood two Hours, I ſpend away, and boil it with two Pounds of Hops (firſt well rubb'd) in a roomly Canvas or ſuch as they call *Straining Cloth*; and at the End of thirty Minutes after it has begun to boil, I take them out, continuing the Ebullition till the Wort breaks enough, when I directly empty it into Coolers, and there have about forty-two Gallons. By this Time, my ſecond Wort is ready to go into the Copper,

Copper, that I made by maſhing up my Goods with the fifty-ſeven Gallons of boiling Water, and letting it ſtand three Quarters of an Hour before I diſcharged it. This I boil away with two Pound more of freſh Hops in the Canvas Bag, in all Reſpects as I did my firſt Wort, and ſo receive off forty-nine Gallons, which, with thirty-ſeven I had before, makes me eighty-ſix, that will (allowing for after Waſtes) be about a Hogſhead and a Half of Ale: And laſt of all, I maſh up with thirty-ſix Gallons of cold Water to ſtand three Quarters of an Hour; and then I boil it with all my Strong-drink Hops, about an Hour and a Half, till I have about twenty-ſeven Gallons, or half a Hogſhead off for Small Beer.

Obſervations on the ſame.

We may obſerve, that the Author of this Receipt is of Opinion, that the Water is hotter and more capable of extracting the Virtue of Pale Malt before it boils than after. For in this Condition, he ſays, it is more loaded with igneous Particles than when raiſed to the State of boiling, whereby its Parts are more broke and divided, and ſo become more open to evaporate the Particles aforeſaid, and admit too much of the circumambient Air, which muſt conſequently render it cooler than before ſuch Ebullition commenced. And further to prove this Aſſertion, if you do but juſt dip your Finger into Water, juſt before it boils, it will bliſter, but when boiling it will not.

Secondly, He here caps his Malt twice, the better to further the Buſineſs in hand, by confining the Heat or Steam, and it is a good Way.

Thirdly, His boiling the Hops in a Canvas, muſt certainly give him the Satisfaction and Benefit of adjuſting the Time of ſuch Ebullition, and alſo by it enjoy the great Advantage of boiling the Wort till it breaks or curdles.

Fourthly, But above all, he brews his Ale from Malt, and not from Goods which muſt certainly load ſuch Drink with the pure Saccharine Juice and lively Particles of the Grain, which are here obtained in their natural

natural Order: On the Contrary, that Ale which is made only from Goods (*i. e.* after a firſt Wort is run off the Malt) muſt conſequently be unpleaſant and unwholeſome, as I have before remarked.

CHAP. IX.

To make China-Ale, *and ſeveral other Sorts.*

TO ſix Gallons of Ale, take a Quarter of a Pound or more of China-root thin ſliced, and a Quarter of a Pound of Coriander-Seed bruiſed; hang theſe in a Tiffany or coarſe Linnen-bag in the Veſſel, till it has done working, and let it ſtand fourteen Days before you bottle it; though the common Sort vended about Town, is nothing more (at beſt) than ten Shilling Beer, put up in ſmall Stone Bottles, with a little Spice, Lemon-peel, and Raiſins or Sugar.

To make an Ale that will taſte like Apricot-Ale.

TAKE, to every Gallon of Ale, one Ounce and a Half of wild Carrot-ſeed bruiſed a little, and hang them in a Linnen Bag in your Barrel, till it is ready to drink, which will be in three Weeks; then bottle it with a little Sugar in every Bottle.

Egg Ale.

TAKE, to twelve Gallons of ſtrong Ale, eight Pounds of lean Beef, which muſt be cut into little Bits, and half ſtewed with a little Water; and when it is cold, let the Gravy be put into the Veſſel of Ale, the Fat being blown off; then let the Beef, with twelve Eggs, their Shells being only bruiſed, but the Films not broken, a Pound of Raiſins of the Sun ſtoned, two Nutmegs, a little Mace and Ginger, and two Oranges cut round, be put into a Linnen Bag, and hang it in the Barrel before it has done working; put in alſo two Quarts of *Malaga* Sack, and ſtop it up; let it ſtand three Weeks; then bottle it, and into every Bottle put a Clove and a a Lump of Sugar.

Cowſlip Ale.

TAKE, to a Barrel of Ale, a Buſhel of the Flowers of Cowſlips pick'd out of the Huſks, and put them into your Ale, when it hath done working, looſe in the Barrel without Bruiſing, and let it ſtand a Fortnight before you bottle it, and, when you bottle it, put a Lump of Sugar in each Bottle.

Blackberry-Ale.

TAKE two Buſhels of Malt, and make it into Strong-Ale, allowing a Quarter of a Pound of Hops to it; when the Wort is cold enough, put it into your Veſſel with a little Yeaſt, and the Juice of three Quarters of a Peck of Blackberries full ripe, and ferment them all together; when it has work'd ſufficiently, ſtop it up cloſe, and at ſix Weeks End you may bottle it, and, in a Fortnight after, it will be fit to drink.

Cock-Ale.

TAKE a Cock of half a Year old, kill him and truſs him well; and put into a Caſk twelve Gallons of Ale, to which add four Pounds of Raiſins of the Sun well pick'd, ſton'd, waſh'd, and dry'd; Dates ſliced Half a Pound; Nutmegs, and Mace two Ounces: Infuſe the Dates and Spices in a Quart of Canary twenty-four Hours, then boil the Cock in a Manner to a Jelly, till a Gallon of Water is reduced to two Quarts; then preſs the Body of him extremely well, and put the Liquor into the Caſk where the Ale is, with the Spices and Fruit, adding a few Blades of Mace; then put to it Half a Pint of new Ale Yeaſt, and let it work well for a Day, and, in two Days, you may broach it for Uſe; or, in hot Weather, the ſecond Day; and if it proves too ſtrong, you may add more plain Ale to palliate this reſtorative Drink, which contributes much to the Invigorating of Nature.

Elderberry-Beer.

TAKE a Hogſhead of the firſt and ſtrongeſt Wort, and boil in the ſame one Buſhel of pick'd Elderberries full ripe; ſtrain off, and, when cold, work the Liquor in the Hogſhead, and not in an open Tun or Tub; and

after it has lain in the Caſk about a Year, bottle it, and it will be a moſt rich Drink, that they call *Ebulum*, and has been often preferr'd to *Port*-Wine, for its pleaſant Taſte and healthful Quality.— *N. B.* There is no Occaſion for the Uſe of Sugar in this Undertaking; becauſe the Wort has Strength and Sweetneſs enough in itſelf to anſwer that End; but there ſhould be an Infuſion of Hops added to the Liquor, by Way of Preſervation and Reliſh. Some, likewiſe, hang a ſmall Bag of bruiſed Spices in the Veſſel. You may make a white Ebulum with pale Malt and white Elderberries.

CHAP. X.

Devonſhire *White-Ale.*

THIS Ale that I have juſt hinted of in my Firſt Part, I ſhall here write a further Account of, in order to ſet forth its Excellency, and pave a Way for its general Reception in the World. To this End I write with an eager Pen, by the Inducement of the beſt Qualities belonging to a public Liquor, *viz.* Pleaſure and Health. Abouty ſixty Years ago this Drink was firſt invented at, or near the Town of *Plymouth*. It is brewed from pale Malt, after the beſt Method known in the Weſtern Parts of this County; and as it is drank at *Plymouth*, in particular by the beſt of that Town, the Alewives, whoſe Province this commonly falls under to manage from the Beginning to the End, are moſt of them as curious in their brewing it, as the Dairy-Woman in making her Butter; for, as it is a white Ale, it is ſoon ſullied by Dirt, and as eaſily preſerved in its frothy Head: Beſides, here their Sluttiſhneſs would be more expoſed, perhaps, than in any other Place in *England*; becauſe, in this Town, there are few or no Cellars, on Account of their ſtony Foundation which is all Marble: And therefore their Repoſitories, being above

Ground, are generally expoſed to the View of their Gueſts, who may paſſingly ſee this Liquor fermenting in a Row of earthen Steens, holding about five or more Gallons each: And, though the Wort is brewed by the Hoſteſs, the Fermentation is brought on by the Purchaſe of what they call *Ripening*, or a Compoſition (as ſome ſay) of the Flower of Malt mixed with the Whites of Eggs: But, as this is a *Noſtrum* known but to few, it is only Gueſſing at the Matter; for, about thirty Years ago, as I am informed, there were only two or three Maſters of the Secret, who ſold it out as we ſell Yeaſt, at ſo much for a certain Quantity; and that every Time a new Brewing of this Sort of Ale happened: A great Ball or Lump of it was generally ſufficient to work four or five Steens of Wort, and convert it from a very clear Body into a thick fermenting one, near the Colour and Conſiſtence of Butter'd Ale, and then it was only fit to be uſed; for if it was let alone to be fine or ſtale, it was rejected as not worthy of buying and drinking. Yet ſome out of Curioſity have kept it in Bottles, rack'd it off clear, and made of it Flip and other Compoſitions very good. Now this white Ale being thus fermented into ſuch a groſs Body, becomes a Sort of Chyle ready prepared for Digeſtion in the Stomach, and yet ſo liquid as to paſs the ſeveral Secretory Ducts of the Animal Syſtem ſoon enough to give room for new Supplies of this pleaſant Tipple, even at one common Sitting in a public Houſe: For though this Drink is not ſo thin and clear as the brown Sorts, yet, by its new, lubricous, ſlippery Parts, it is ſoon diſcharged out of the Stomach; and notwithſtanding ſuch Evacuations, it leaves a very nutritious Quality behind it in the Body, that brings it under a juſt Reputation for preventing and recovering thoſe who are not too far gone in Conſumptions; and therefore would be of extraordinary Service to labouring People: In ſhort, this famous Liquor is of ſuch a ſalubrious Nature as renders it a moſt agreeable Drink both to the ſedentary and active Perſon; which plainly ſhews the

tranſcendent Quality peculiar to this White-Ale, beyond all other Malt-Liquors whatſoever: For who dare, nay, who can, make ſo free with any new Beer or Ale, while it is under Fermentation, as with this? And that by Reaſon of the poiſonous Quality of the Yeaſt, and the fulſome, nauſeating, unwholeſome Nature, that ſuch working Drinks are endowed with; whereas this invites one to drink it as faſt as any of the common brown or pale Aes, and at the ſame Time adminiſters to the Body ſuch medicinal Aſſiſtance, that no other Malt Drink, Wine, nor any other potable Liquor now in Uſe, as I know of, comes up to it, not only for the aforeſaid Intention, but it is likewiſe uſually preſcribed by Phyſicians, as a Remedy in the Cholic and Gravel, by its lubricating, diuretic Nature; and it is the beſt Liquor in the World for a Wet Nurſe to drink for increaſing a moſt nouriſhing Milk. Its Strength alſo is ſo great, that, though it is drank while working, it is as intoxicating as the common Ales or Beers; for by the Time a Man has drank a Quart or two to his Share, he will find it enough to go off with; and if any one thinks fit to make it ſtronger (as is often done) it is only adding Half a Pint of Sherry with a little Loaf-Sugar and Nutmeg, and then it will not only be ſtrong, but very pleaſant; and ſometimes entertaining to a Fault; inſomuch that ſeveral have been inticed by its luſcious, ſtimulating Taſte, and cordial Quality, to a Degree of Extravagance, by their too frequent Expence of Money and Time in the Enjoyment of this delicate improv'd Ale.— To all which, I ſhall add the Opinion of an experienced Phyſician who has drank of it, *viz.* I take the *Devonſhire* White-Ale to be a very pleaſant nutritive Liquor, and well fitted to paſs the ſeveral Secretions of the human Body; not only by its conſiſting of ſuch rarified adhæſive Particles from the Saccharine Juice of the Vegetable, but its being drank in a particularly agreeable, briſk, and ſmooth State, in Taſte not unlike our firſt Nutriment, which certainly renders it eaſy of Concoction in the Stomach, and being mode-

rately taken, it may juſtly claim a Place in the firſt Claſs of diuretic Reſtoratives.

CHAP. XI.

A Scheme for brewing ſtrong Malt-Liquors, *after a new improved Method.*

PROCURE a ſtrong, ſound, fine Wort, by uſing good Straw-dried Amber Malt, juſt broke; pure, ſoft, running, or rain Water, in a right Degree of Heat, that is, juſt before it boils, and ſtirred together no more than is abſolutely neceſſary to keep from Balling, letting it ſtand under a Cover of freſh Malt its due Time in a double Maſh-tun; I mean, a leſſer one, put into a larger; the former to be exceeding ſmooth within-ſide, and to have four Feet, either fixed or moveable in the latter, with a proper Braſs Cock, long enough in its Barrel to ſcrew through both their Bottoms, and a Strainer to be faſtened to one End every Time it is us'd; or, which is better, the inner one to have a falſe Bottom, as in the common Way: The Cavity or Diſtance between the Tuns ſhould be from ſix to twelve Inches or more according to their Size; their Tops to be of an equal Height, and to have another common Cock to fix in towards the Bottom of the outer Tun, to draw off the Water at Pleaſure; pouring boiling Water in ſo as to encompaſs the inner one very near as high as the Maſh: Then, when the Wort is let go, to receive it in a Gooſe-quill Stream upon good new Hops well rubbed between the Hands, ſetting the firſt Wort ſo received with the Hops aſide, continuing to lade over by Hand-bowl-fulls hot Liquor enough for a ſecond Wort, which muſt be received on rubbed Hops, as before: Then ſtrain and mix both Worts together, diſplaying them thin to cool; this done, receive a little of it into a clean Hand-bowl, or rather well glaz'd earthen Pan (and indeed were earthen Ware, ſuch as we call the Stone-fort, made uſe of throughout the whole Manage-

Management, it would be much the better) wherein is a ſufficient Quantity of good freſh Yeaſt, and mix them well together; this Mixture put into your Barrel, Kilderkin, or other Veſſels being thoroughly ſweet and dry, and let the reſt of the Wort run as fine as poſſible upon it, till the Veſſel is full, and the Whole well mixed. After a due Fermentation, put away what has work'd out, and fill up the Veſſel with the Infuſion of Hops, as hereafter directed, ſtopping it up as cloſe as may be, excepting the Top-vent or Cork-hole, in the upright Caſk where it work'd out at, over which paſte a Piece of brown Cap-paper, and ſo let it remain, till upon Pegging it at Diſcretion you obſerve it comes fine: Then, if you would keep it longer, have ready another Veſſel of the ſame Size, into which rack off your Drink, and at the ſame Time put into it three Parts of parched Wheat, and one of whole malted Horſe-beans freed from their Hulls, or Dumplins, made after this Manner, *viz.* Take fine Malt, Rye, and Bean-flour, (if the two laſt were malted, they would be the better) each equal Parts; mix them up with a ſtrong Infuſion of Hops, or ſome of the ſame Drink, into a Maſs, out of which form Dumplins; then bung it very tight, and keep it in a cool Cellar for three or four Months or longer, and you will enjoy a fine, ſound, ſparkling, pleaſant, and wholeſome vinous Liquor from the Tap; or, you may then again rack and bottle it off for Uſe.

The Infuſion of Hops.

For this Purpoſe it would be very proper to have a large Veſſel made of Copper and well tinn'd, in the Shape of a Coffee-pot, wide at Bottom and narrow at Top, with a Spout in the Side, having a Strainer next to the Body, and a Screw-Top to it; likewiſe, a Head to ſcrew on: Into this Pot put your Hops, being firſt well rubbed between the Hands, with a little Salt of Tartar (a Quarter of an Ounce to four Pounds of Hops) and as much fair Water as will cover them well: Let it ſtand all Night cold, and the next Morning ſet it over a gentle Fire ſo as to boil up; take it

off and let it ſtand till cold (the Tops being cloſe ſcrew'd all the while;) then pour off the clear Liquor, without Preſſure, through the Spout, which immediately pour gently into the Veſſel, by the Help of a long, narrow-ſpouted Funnel to reach down into the Drink, without much damaging the Head of it.

The Reaſon why I deviate from the common Way of Brewing is, that it is a juſtly received Maxim among the moſt Judicious, that the more light, pure, ſoft, and vinous our Malt-Liquors are, ſo much the more are they homogenous, and better adapted to paſs the ſeveral Secretions of the Human Body, and conſequently the more wholeſome: Therefore this being our Buſineſs, in the firſt Place I obſerve, that long Maſhing (as commonly practiſed) renders the Wort liable to ſeveral Accidents, eſpecially, according to the Seaſon of the Year it is performed in; but one more particularly of impregnating the imbib'd Liquid, with ſo much of the farinaceous or gruelly Part of the Malt, as not only to induce an Acidity, but likewiſe a Ropineſs in the Drink, which I take to be chiefly owing to this erroneous Management; becauſe it muſt be granted, that it is a due and regular Degree of Heat (*cæteris paribus*) that cauſes the Grain to emit its Virtue; now, by long Maſhing, by and by, the contrary Principle gets the Aſcendant, and ſo chills and ſtagnates it, as to bring on this vicious Property, which, the longer it is thus kept neither hot nor cold, it is the more expoſed to. Therefore, I have recommended this new Method of a double Maſh-tun, whoſe outer Part, by being filled with boiling Water as ſoon as the Maſh is ſet, facilitates the Operation by Way of *Balneum Mariæ*; that, before the incircling Water is cold, the Wort may be let go: And in Winter eſpecially, this muſt be of conſiderable Service, becauſe you may keep the Water in what Degree of Heat you pleaſe, by running it off as it cools, and ſtill adding more boiling. In order to this, you ſhould have two Coppers employed, to be more certain in the Heat of your Liquors, and to expedite the Performance; which is a Matter of

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no little Moment, ſeeing it is ſo eſſentially neceſſary in avoiding the aforeſaid bad Accidents, and procuring a pure, ſound, vinous Wort. Again, boiling Malt-Liquors, tho' ſo cuſtomary (in my Opinion) fruſtrates our Expectation; inſomuch, as it certainly hardens and thickens them, which is one chief Reaſon why they are commonly allotted ſo much Time to digeſt in the Veſſel, in order to break and divide their coheſive mummy Particles; which are much better primarily prevented by not boiling the Wort at all, notwithſtanding the common Objection, That, without Boiling, the Liquor will be raw and not keep: To which I anſwer, that the Liquor has before received due Maturation in the Copper and Maſh-tun, beſides the after Digeſtion and Rarefaction it acquires in the Veſſel by Fermentation and Age. And as to its being more liable to decay; it is certainly, not the Boiling that preſerves Malt-Liquors, but their Spirit, which is obvious to a mean Capacity; and could we poſſibly extract the Quinteſſence of the Malt without it, I ſhould much rather chuſe not to uſe any Heat. Laſtly, in order to enjoy Malt-drinks, that are to be kept any Time, in a ſound, fine, and mellow Condition, I have found it very neceſſary to free them (as ſoon as thoroughly digeſted and fine in the Veſſel) from their groſs Sediments, or common Lee, which, from its yeaſty Particles, *&c.* never fails more or leſs to damage ſuch Drinks, eſpecially the pale Sorts, by inducing an Acidity, and rendering them liable to fret and become foul upon Alteration of Weather; therefore a proper artificial, alcalous Compoſition ſubſtituted in its ſtead, prevents theſe bad Accidents, and very much preſerves and meliorates the Liquor it is put into.

Examples to illuſtrate the great Advantage of infuſing the Hop in a cloſe Veſſel, and not boiling it in an open Copper.

By this I engage myſelf in an Article, hitherto omitted by all others, and yet I think it is a very Capital one; by Reaſon the firſt floury Spirit of this aromatic, fine, oily Vegetable is of ſuch an excellent Nature, that the moſt learned Naturaliſt allows it to have no *Succedaneum*; and there-

therefore I endeavoured to contrive a Way (that I have experienced) to confine and preſerve its noble Quality intire, which cannot poſſibly be done, where there is an open Evaporation allowed the Hop; and tho' I have all along hitherto in my two former Treatiſes encouraged a ſhort Boiling of freſh Hops, in order to their anſwering this great End, yet believe me, it is only doing the Thing in Part, that even then is a thouſand Times preferable to the filthy, unwholeſome, old Way of boiling them two or three Hours; which, as I have remarked, never fails of extracting the worſer and loſing the better Part of this fine Ingredient. So that this, like the beſt of many other Things, may be perverted; as I can prove by many Examples, of which the following ſhall ſuffice, *viz.* There is a certain Plant called *Daucus* or Wild-carrot, which grows plentifully in ſome common Fields, about Knee-high, with a bunchy Head, in the Shape of an Onion in Seed, and is brown good Part of the Winter; the Seed of which is a Carminative, and has ſeveral other excellent Qualities, particularly two, one of a bitteriſh, and the other of a peachy Savour; of which Seeds take Half a Pint, and boil them in a Canvas-bag in a Kilderkin of Ale-Wort Half an Hour, and they will not fail to give it a fine Reliſh, and keep it ſound ſome Time: But if you take the ſame Seeds at the End of that Time, and ſqueeze them into the Drink, there will come out an unſufferable, ill-palated oily Juice, that will ſpoil all the Liquor it is mixed with. The ſame it is more or leſs with other Vegetables, the Hop in particular, if uſed after the ſame Manner, or by too long boiling, and evaporating its beſt Part or Spirit by the Steam. Somewhat agreeable to this is the modern Practice of preparing ſome Medicines from Vegetables; the Virtues of which were heretofore directed to be obtained, by Decoction or Boiling, as in the *bitter Decoctions*, and that of *Sena*, of our old Diſpenſatory; but now (among other great Amendments and Improvements by the learned Faculty) they are expreſsly and more elegantly ordered to be infuſed.

A CER-

A CERTAIN Virtuoſo who once dealt pretty largely in the Diſtilling Buſineſs, and was noted for his Skill in meliorating our *Engliſh* Brandy, ſo as to render it little inferior to Foreign, uſed the following Method, *viz.* to hang a pretty large Piece of dry *Florentine* Orrice-Root by a Packthread, or otherwiſe, in the Top-Part of an Alembic, ſo as the boiling Liquor may not touch it, and it will give the Spirit or Water, ſo drawn off, a fine, agreeable, Raſpberry, vinous Reliſh and Flavour: But if you boil it in the Liquor, it will have none of this delicate Quality, but, inſtead thereof, impregnate it with a very diſagreeable, harſh, earthy Taſte. So likewiſe if you infuſe this Root cut in Slices in a little *Engliſh* Brandy for about ſix or eight Hours, it will much improve it; but, if any conſiderable Time longer, it will affect it in the diſagreeable Manner aforeſaid.

BUT, for a further Proof that Hops ſhould not be boiled in Wort, but infuſed, I add the following demonſtrative Reaſon: A Diſtiller boiled off a Brewing of ſtrong Wort in his Still, and for an Experiment, as ſoon as he put in his Hops, clapp'd on the Head, and there came off by the Worm only a bitter Water ſaturated with the pure aromatic Part of the Hop.

Now as ſome may not have the Conveniences of uſing the Copper-pot with its ſcrew-Head as I have before deſcribed; ſuch may have one made of Tin inſtead thereof; or I would adviſe you firſt to rub and then to put one, two, or more Pounds of Hops with the Salt of Tartar into an earthen glazed Pot, allowing Room enough, and made ſomewhat like a Churn, broad at Bottom and narrow at Top; on theſe pour ſo much pure, ſoft Water, as will wet and cover them well, ſo that a Quart may be got off each Pound, and immediately ſtop it up with a Cork, or ſome other Thing, to keep all the Steam ſo in, that none may make its Eſcape; ſet it over a gentle Fire, and let it boil up; then remove it and ſet it by till thoroughly cold: Then pour the bitter Liquor off into the Caſk as ſoon as it has done working, and bung it down tight directly. But here in

courſe

courſe will ariſe an Objection againſt this Procedure, becauſe the Hop is to be infuſed in hot Water and not Wort, and ſo muſt make the Drink weak and raw. To this I anſwer, That though I have here recommended Water rather than Wort, yet every one is at his Liberty to act as he pleaſes, and upon Trial, I believe, will be convinced, that pure ſoft Water is the beſt *Menſtruum* or Vehicle to penetrate into, divide, and imbibe the viſcid or coheſive Part of the Hop by Infuſion, eſpecially as it is aſſiſted by the Salt of Tartar, which is a great Alkali and very wholeſome; ſo that, by thus confining the Steam of both Water and Hop in a glazed earthen, or other Veſſel, the Quinteſſence of the Hop will have a pure Extraction as ſoon as cold, after the ſame Manner that Teas are made, whereby the fineſt Parts of this moſt ſerviceable Vegetable will be obtained, and the earthy, unwholeſome Qualities left behind for the Imbittering of Small-beer, or doing a good Piece of Service by giving them to a poor Neighbour; whereas if hot Wort was uſed inſtead of Water, it would not be able to receive ſuch a ſtrong Tincture from the Hop; becauſe both the Hop and Wort are two oily Bodies that cannot ſo eaſily incorporate as a thinner Liquid: Nor can ſo much Water as a Quart to a Kilderkin of ſtrong Drink be of any Signification, ſince it is loaded with the full Strength of the ſpirituous Hop, that, to preſerve in the beſt Manner, I put into the Barrel as ſoon as it has done working, and immediately bung it up in order to conſerve its Spirits intire, which if mixed with the Wort that is to be afterwards fermented, in courſe there will be a great Expence of thoſe Spirits, which may after this Method be truly preſerved.

A further Account of Brewing Malt-Liquors, *without Boiling.*

In my Second Part, Page 150, I wrote largely on this Article, and yet think myſelf under ſome Obligation to enlarge on the ſame Subject here, by further recommending this advantageous Method to the World, as being very profitable, pleaſant, and wholeſome.

A Mil-

A Miller, near *Chelmsford* in *Eſſex*, is famous for brewing his Drink after this Manner, that he makes ſo ſtrong as to burn if thrown into the Fire, and is always fine. His Way is to boil the Hops in Water, and, after they are ſtrained out, he puts that Water into his Tun for the firſt Maſh; and, if he has Occaſion for more hot Water, he boils freſh Hops, ſtrains them out, and puts the Liquor over the Goods, as he did the firſt Time; becauſe the more terrene and feculent Parts of the Hop, commonly extracted by Ebullition, are by this Method as it were filtred out, and left behind in the Grains; for there is a natural Contract between the earthy, phlegmatic Parts of the Malt and Hops, and ſo *è Contrà*, as the Salts of the Yeaſt ſooner join or have a readier Contract with thoſe of the corrupted or fermented Grain, *i. e.* Malt in Wort, than they do with Moloſſes, or other Bodies that have not more or leſs undergone a Prefermentation: After this he cools his Wort and ferments as uſual, but without boiling it at all. And alſo in *Hertfordſhire*, I know a Man that has brewed all his Drink for his own Family many Years after this Manner, with great Reputation. The ſame likewiſe I found practiſed at *Froome*, and ſome other Parts of *Somerſetſhire*, and is certainly an excellent Way, provided this can be done without looſing any of the Hop's Spirit by Evaporation: Wherefore, inſtead of boiling them in an open Copper, they ſhould be infuſed or boiled under ſuch a confining Cover, as will ſecure their Virtue; then if they are ſtrained out, and the Water put over the Malt, the Wort will certainly be the better; and in this Caſe fewer Hops will do, becauſe their whole Strength is thus intirely preſerved. Wort is better for not being boiled, becauſe Boiling thickens and hardens it; and Waters alſo by evaporating the lighter, ſofter, and more pure Part: Though I cannot ſay that any Spirit evaporates in boiling Wort; becauſe, if the Grain is ſo opened as to emit any Spirits in Malting, it is thoroughly loſt in the Watering and Drying, as was fairly demonſtrated by the Experiment

of

of the Still above mentioned in the Account of infuſing Hops. Alſo the common Objection of its being raw, and not fit for keeping, I have already obviated by this Reaſon, that it is not Boiling that maturates and preſerves Malt-Liquors, but a right and due Fermentation, and its Spirit; which is likewiſe further confirmed by the Practice of a certain wealthy Virtuoſo near *Briſtol*, who conſtantly brews his Ale and Table-Drink without boiling their Worts; and, in his own Words, he ſometimes keeps his Ale near twelve Months, and believes both to be as good as any of his Neighbours: Notwithſtanding he is very particular in another Reſpect, which is, that he never puts Hop or any other Bitter to either Sort, and affirms it to be pleaſanter and wholeſomer without; though he formerly us'd to brew in the common Way.

CHAP. XII.

Of Worts *and their Improvements, after a new Method.*

WORT is the oily, ſpirituous Parts of the Malt, obtain'd by Infuſions and Waſhings of hot Water, that lie and ſoak with the Grain, one, two, or more Hours; which gradually opens the Pores, whereby it the more freely imparts its Virtues by the further Aſſiſtance of a Cover of freſh Malt, which here prevents the Eſcape of the finer, ſofter, and moſt penetrating Parts of the Water by Steam, and cauſes a more equal Diſtribution of them throughout the Body of the Maſh, by a due Confinement of the Heat; and, being ſwell'd and ſaturated to its utmoſt Diſtention, returns the overplus Liquor laden with the ſweet, balſamic, nouriſhing, pleaſant Parts of its Flower, and ſo continues to emit the ſame in a regular Tincture, by the ſeveral Ladings over or Waſhings that leiſurely follow, and are conſtantly diſcharged by the Cock without ſtopping,

till

till the juſt Quantity is got off in a fine tranſparent Stream. Now to enjoy this virgin, delicate Liquor ſo obtained, free of all Adulteration, much Waſte, and in its utmoſt Purity, is the Deſign of this Part. To this End, I put freſh Hops firſt rubb'd well between the Hands into the Tub under the Cock for the Wort to run on, all the Time it is ſpending off, and, when I have my Quantity of firſt Wort, I empty the Tub of that and the Hop, ſtill continuing without Intermiſſion my Leakings over and Runnings out on another Parcel of freſh Hops for my ſecond Wort; and if after that ſmall Beer is to be made, more freſh Hops ſhould be employed to receive it all the Time it comes away: And, when I have got Poſſeſſion of a genuine Wort, it is to be managed as before, and as hereafter I ſhall direct. Now I am to account for the Excellency of this Method, and to ſhew that it tranſcends that practiſed by me at my great Brew-houſe; where, after the firſt Piece of Wort was diſcharged off from under its Capping of freſh Malt, all the after Worts were obliged to be expoſed an Hour, or near one each, on the Goods, to infuſe and bring away their Strength; about Half an Hour running off, and almoſt Half an Hour longer before it can be pumped out of the Underback into the Copper. In all which three Ways the Worts ſometimes ſuffer in their better Part, which I prove by the Accidents of pricking, or a little ſouring of the Wort, that frequently happen in the Maſh-tun or Underback, eſpecially in hot Weather. From hence it was that my Malt-Liquors would ſometimes ſuddenly acquire Staleneſs, becauſe, truly ſpeaking, they thus were deprived of Part of their original, native Sweetneſs before they went into the Copper, that is irrecoverable afterwards. But as this ancient Management commonly affects the Wort more or leſs in its fundamental Principle, but ſo as at firſt not to be perceived by the Unwary and Ignorant; it generally likewiſe eſcapes the Cenſure of the Drinker as to its true Cauſe, who falſly imputes the Badneſs of it to the Underboiling it,

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the Length of Time in keeping it, or to the Want of a ſufficient Quantity of Hops in it. However, it is certain that ſuch damaged Wort is of dangerous Conſequence to the human Body; for, if the Wort is ſick, it cannot fail of communicating its unwholeſome Quality to the Blood; and therefore I hope my Caution will give a juſt Idea to my Reader of the too commonly over-look'd Miſchief that accompanies ſuch ill brewed Beers and Ales, and ſo prevent the Loſs of Health, Time, and Money, that many have been brought under, by not knowing the Source and Spring of their Illneſs; for it is certain that great Errors may be inſenſibly committed in the ſmalleſt and meaneſt Preparations, for Want of rightly underſtanding the Forms of Nature. So that I think myſelf obliged to write againſt the neceſſitous (though common) Way I formerly followed, in ſuffering the Wort to lie in the open, broad Maſh-tun, and Underback of my great Brew-houſe an Hour and a Half, or two Hours, without ſo much as a Hop in it to ſecure its innate, tender Virtue, or Sweetneſs, againſt receiving Prejudice from Time, Utenſils, Heat, and *Effluvia's* of corrupted Air. On the Contrary, the Method of obtaining Wort by Lading over hot Water proves the vaſt Benefit that it receives, when intirely preſerved in its pure, natural State; as by ſuch quick Diſpatch, and the Tincture of the Hops, it ſurely does. For it is certain, that both theſe Conveniences potently oppoſe and reſiſt Acidities and other ill Qualities, which often have proved the Bane of human Bodies, and in their Room maintained Malt Drinks in a wholeſome, pleaſant, mild Condition fron their firſt Running out of the Maſh-tub to their laſt Conſumption. Which Management is alſo much better than that practiſed by ſome common Brewers, who, to ſecure all ſafe, lay a good Quantity of Hops in the Hollow between the falſe and fix'd Bottom of the Maſh-tub: But by their Leave they are wrong in ſo doing, becauſe here their Hops are obliged to lie the whole Time of the Brewing, which con-

conſequently muſt extract the foul, diſagreeable, earthy Part of them, and do the Drink great Damage. For herein conſiſts the niceſt Point in extracting the Virtue of any Vegetables, Minerals, *&c.* eſpecially ſuch as require ſeveral Digeſtions; firſt, by a proper *Menſtruum* to obtain, and afterwards to preſerve their fine, purer, and better Parts, ſo as at the ſame Time to avoid their more groſs and terrene Qualities: In this, I ſay, conſiſts the Perfection of all ſuch Artificial, Spirituous Liquors that are to be procur'd by Infuſion, Decoction, *&c.* Thus, Take a common Fire-ſhovel and heat it, then put Coffee-berries on it, and heat them alſo till they ſweat; while this is doing, ſet ſome Water over the Fire in a Coffee-pot; when heated, throw it away, and dry the empty Pot on the Fire; then take the Powder of the heated Berries and put into the warm Pot, and immediately Water heated under a cloſe Cover, and juſt before it boils, over it; and then this previous, gentle Heat, by the preſent Admiſſion of igneous Particles into the Pores of the Berries, will ſo diſtend and divide them, as to cauſe them much readier to communicate their purer and lighter Parts to thoſe of the heated Water; and in three or four Minutes ſtanding cloſe cover'd will afford a pleaſant, ſtrong Liquor, without partaking any of the harſh, acid, groſs Part of it, which the common Management yields more or leſs by uſing the Powder cold, boiling and ſtanding double the Time.

Worts prepar'd by Digeſtion.

By this Way, as a late Writer obſerves, the Particles of Bodies are extracted, which are more light than the terreſtrial Ones they proceed from, and that by a certain *Menſtruum* that they intimately mix with. To this End, a gentle Fire is commonly uſed, that the Corpuſcles which are moſt volatile may ſeparate as it were of their own Accord; for a fierce Fire forces out the *Feces* as well as the finer Particles; and, if it does not abate the Strength of the Liquor, it will not fail of fouling it; according to which Rules, ſays he, there may be practiſed a Sort of curing ſtrong Worts, thus,

viz. Put your Wort into the Copper and on it fit a blind Head that may be closely secur'd with a Paste, which by a moderate Fire may be digested twenty or more Hours, with a sufficient Quantity of Hops, or some other Ingredients instead of them, after which it may be fermented as usual. By this Method, either Malt, or Treacle Wort, is said to be brought into an excellent, drinkable Condition, without diminishing its Spirit or fine Part. But I can't join in Sentiment with him on this Account, because, by this long, close Stewing, the whole Power of the Hop is incorporated with the Wort to the last Degree, never to be separated while it is Drink; and then it will be attended with many ill Consequences, as I have before observed: Besides, the Wort here is heated or boiled in the Dark in a very blind Manner, and may thus obtain too thick a Body, which will much take off that fine, vinous Consistence which all Malt-Liquors should have: For Wort, though it has by a proper Length of Time boiled into innumerable Particles; yet, by being afterwards boiled on too long, the whole Body of it will again reunite and become an intire Consistence, as it was before it broke into such Particles. But I must own, if this Operation can be truly adjusted, so that the Wort and Hop may be boiled to a true Crisis under Cover, it is an excellent Way, and I am a Votary for such keeping in the Steam of Wort; though there is an Objection made by some, that the Wort cannot lose any Spirit in boiling openly, because the Liquor was never yet fermented. To this I answer, that though a Spirit can't be extracted from Wort, till it is fermented, yet it is certainly true that the softest and finest Parts of either Water, or Wort, will away in open and long Boiling, that were intirely necessary to incide and dissolve the viscid Body of the fermented Liquor, and make it healthful to the Drinker. Therefore I think this same Author more in the right when he advises, that as soon as Wort and Hops are put into a Copper, there should be a large blind Head fixed on the same, that is to be luted so

faſt as nothing can evaporate: Then gently boil the Space of one or two Hours, as the Strength of your Liquor is; then remove the Head, ſtrain the Hops, and let out the Wort into a Cooler, ſo, ſays he, you have a Liquor in which is the full Virtue of the Grain and Hop. But in my humble Opinion he has not hit the Mark yet; for though ſuch Confinement preſerves the Steam, and ſome Virtue of the Wort from flying off, it is an obſcure and uncertain Way; becauſe there is no ſeeing when the Wort breaks, nor an Opportunity of taking out the Hops in due Time, ſo that there ought to be a better Method contriv'd. To which End I advance my Notion as follows, *viz.* In *September* 1736, as I was travelling through *Norfolk*, I happen'd into the Company of an eminent common Brewer, to whom I was hinting the great Service of confining the Steam of Worts while they boiled. In anſwer to which he told me he had attempted the very Thing, by faſtening his two wooden Doors juſt above the Curb of the Copper, and alſo thought he had ſecured the ſquare Hole in the Middle of his Copper-back; accordingly he ordered the Stoker to boil the Wort as uſual; but it was not long before the Board on the ſquare Hole gave away, and the Wort burſted out with ſuch Fury that it boiled over on the Ground, and had like to have ſcalded the Fire-man; which ſo affrighted him that away he went, and could never be perſuaded to live with his Maſter afterwards. Here I obſerved his Copper-back to be but three Feet higher than the Copper, which conſequently was too ſhort a Diſtance for ſuch a Trial; for in this Caſe there ſhould be ſuch a Space allowed as to weaken the Aſcent of the boiling Wort and Steam: So that I am of Opinion nothing leſs than four or five Feet high Vacation ought to be allowed for this Performance, in order to break the Force of ſuch an Ebullition, by thus giving it Room enough to expand, and with all the Advantage that can be given to the Strength of the Brick and Wood-work about the ſame. By this Contrivance you may adjuſt the true Time of boiling both Wort and Hops, and that by only turn-

ing the Cock at the End of your Copper-Arm, and ſee at any Time in a little drawn Wort, in what Condition all the reſt is; which is far more profitable to the Brewer, and much better for the Drink than boiling a firſt Wort four Hours with all its Hops, as I heard another did in an open, low Copper, and yet was reckoned the greateſt Brewer in the Country he lived in. In fine, the Benefit of this new Way muſt be conſiderable, ſince it is generally allowed, that according to the preſent common Mode of laying a Back over the Copper, with a narrow Hole in the Middle of the ſame for the Evacuation of the Steam, and a Pair of folding Doors at the Front, near Half of the Waſte of Worts is ſaved, which uſed to be loſt when boiled in an open Copper.

How three Men in Partnerſhip brewed and ſold Ale, *without buying* Malt, *or paying* Exciſe.

THIS Scheme as I was credibly informed, was invented by a *Yorkſhire* Man, who buoyed up with the Aſſurance of Succeſs, propoſed it to two of his Countrymen, that readily came into his Meaſures. For this Purpoſe they took a ground Room in *Gray's-Inn Lane*, which they furniſhed with a large Tub, a few Caſks, and a ſmall Kettle. Then they proceeded and bought a Sack of the coarſeſt Sugar, putting the ſame into the great Tub, firſt charged with a due Quantity of cold Water that they maſhed and mixed well together. To this they added an Infuſion of Hops, ſo made by pouring ſcalding Water on a Parcel in a Firkin, that when ſoaked enough they drew out at the Tap-hole, and worked all with Yeaſt as is done in Malt-Liquors. When the Drink was ready, they carried it out in the Dark to a Cellar in St. *Martin's-Lane*, where they ſold it for common Ale at a Price that invited good Cuſtom, and that brought in ſuch a Profit as ſoon made two of the Partners become extravagant Rakes to the Ruin of their dark Enterprize.

CHAP.

CHAP. XIII.

The Barnſtable *Way of Brewing a Hogſhead of fine* Pale-Ale.

THEY draw off a Hogſhead of fine pleaſant Straw-coloured Ale from twelve Buſhels of Malt, thus, *viz.* They boil the Water, then throw two Pails of cold into the Maſh-tun, and the boiling hot Water on that; then immediately put in the Malt Half a Buſhel at a Time: After ſtirring it till all is ſoaked, they cap it with Malt or Bran, and cover it cloſe to ſtand three Hours; then ſee if the Maſh is ſunk in the Middle which it will ſometimes do, and, when it does, it ſhews the Strength of the Goods, and muſt be filled up level with boiling Water to ſtand Half an Hour after, when it is to be run off in a Gooſe-quill Stream, which is to be returned upon the Goods again, by a Bowl or Pail-full at a Time as back as you can from the Cock; for then the Liquor ſtrains through the Body of the Goods, and at laſt comes very fine; otherwiſe you force the thick Part down to the Cock; this is call'd *Doubling*, which they continue to do for Half an Hour, then ſtop, and let it ſtand Half an Hour longer in Winter, but not in Summer; then they rub four Pounds of Hops very fine into the Kieve for the Wort to run off; they don't draw it off too near before they lade over more boiling Water out of the Copper, that is to be continued till you have your Quantity of Ale Wort, which with all your Hops is to be boiled till the Liquor breaks or curdles; then they empty all into large earthen long Pans or Coolers, that they work, when cold, with the ſame Hops all together, thus, *viz.* They put a little Yeaſt (as little as may be, and that not a Day old if they can help it) to a Parcel, and mix that with all the reſt to work twelve or fourteen Hours, and then they directly ſtrain it into the Barrel, where they keep filling it up with freſh Wort till they leave it full at laſt. When the Fermenting is finiſhed, they paſte a Piece of brown Paper over the Bung-hole for

a Fortnight, which will very much conduce to its fining by its having a little Air, and then bung for good with a wooden Stopple. Thus they will draw their Ale perfectly fine in three Weeks or a Month at moſt.

N. B. THEY never maſh here above once for their ſtrong Drink, and ſeldom make ſmall, becauſe of its great Cheapneſs. Therefore they think it turns to a better Account to leave a Strength in the Grains for feeding their Swine.

CHAP. XIV.

Working Beer *and* Ale, *after a new Way, to their great Advantage.*

YEAST is an Acid, as appears by its ſoon turning ſour, and conſiſts of a great Quantity of ſubtile and ſpirituous Particles, wrapped up in ſuch as are viſcid: When therefore this is mixed with Liquor, it occaſions an inteſtine Motion by the interfering of Particles of different Gravities, as the ſpirituous Parts will be continually ſtriving to get up to the Surface, and the viſcid Ones continually retarding ſuch Aſcent and preventing their Eſcape. So that by theſe two concurring Cauſes, the Particles extracted from the Grain will, by frequent Occurſions, be ſo comminuted, as continually to increaſe the more ſubtil and ſpirtuous Parts, until all that can be made ſo by Attrition or Fretting are ſet looſe from their viſcid Confinements, as a learned Author plainly demonſtrates. It is alſo influenced by the Air that in Summer is warm, light and thin, and greatly promotes it; in Winter it is thick, cold, and heavy, and much retards it. Alſo in Spring, and Summer, the floating Particles of the Air, that are of the ſame Kind as thoſe in the fermenting Liquor, join them with their Strength, and make the Working more violent. So Malt-Liquors made from Beans, Oats, or other Vegetables will ferment higher and be ſtronger, if brewed when they are in Bloſſom.

After the old Way.

As I have all along in the ſeveral foregoing Operations endeavoured to preſerve the more pure, light, and ſubtile Parts of the Water, Malt, Wort, and Hops, I ſhall here likewiſe do the ſame in Fermentation. In the Working of Beer and Ale, the Spirits have the greateſt Opportunity of making their Eſcape, and therefore here is the Place for your chiefeſt Care, that the Fermentation may be brought on cool and leiſurely under the cloſe Cover of a Lid and Cloths to preſerve the Spirits; for, if you put your Noſe over it while it is working, you will find the Strength ready to ſuffocate you; which plainly ſhews it emits a great deal of ſpirituous Effluvia, that will fly away if not kept well in, as you may alſo prove by putting a lighted Candle a little down under the Cover, and it will extinguiſh it. But, if the Fermentation is not thus confined, your Candle will remain lighted, becauſe the Spirits will then evaporate freely.

After the new Way.

THIS is very different from the old; for by this the Uſe of Tubs and working Tuns are wholly laid aſide, on Account of the great Loſs of Spirits that ſuch open Utenſils expoſe the Drink to, that here have ſuch a free Communication with the circumambient Air, as to be influenced by it in a moſt plenary Manner; ſo that, if too free an Acceſs to the aerial Particles is detrimental to the Malt-Liquor, here is full Liberty for their Action. To prevent which, take a little Wort before it is quite cold, and mix it with ſome Yeaſt; when it is fermented, put into it a Hogſhead or Butt, and on that let the Wort run out of the Back, or pour it out of your Tubs as fine as poſſible, and as cool as the Seaſon will permit. Then ſtop up the Bung-hole in the Head with a turned Piece of Wood wrapped round with wetted brown Paper, and let the Yeaſt work out of a common Cork-hole made in the Front of the upright Caſk within about an Inch of the upper Head, by a little Piece of Leather nail'd under it, and a wooden Spout under that, to convey the Yeaſt into a Tub on

the Ground; ſo will you enjoy a Drink much ſtronger, finer, and better reliſh'd, than when work'd and tunn'd after the old Faſhion: For this Way cauſes the Beer, or Ale, to taſte ſmooth, and retain a briſk, lively Quality to the laſt. But then ſuch Working muſt be in a right Manner, neither too much nor too little. If in the firſt Degree, it will be apt to boil in the Caſk in Summer almoſt like the Motion in a Copper, and bring it under a ſtale Hardneſs, make it taſte harſh in the Mouth, and give too deep a Colour to the paler Sort of Drink; For this Reaſon ſome will follow this Method of Fermenting it all together in the Caſk only in Winter, and not in Summer. If in the ſecond Degree, it will be always ſputtering and never fine. But the Danger of theſe Extreams will not be very hazardous where Care and Judgment attend the Work, and ſo may be perform'd at any Time of the Year with Safety, though the Equinoxes or moſt temperate Seaſons are certainly the beſt. Beſides which, here is a great deal of Waſte prevented that always accompanies the Vat, Tun, Pump, Pail, or Jett, uſed in working Malt-Liquors, after the old Way. And if there is almoſt Half the Waſte of Wort ſaved in boiling Malt-Liquors by a Copper-back, there is alſo a Waſte of the Drink prevented that otherwiſe would happen if work'd in the open Tub or Tun: And to prove the great Benefit of this Method, make but an Experiment even in your ſmall Beer, and you will find that work'd in the Caſk, ſtronger, pleaſanter, and will keep longer, than that firſt work'd in an open Veſſel, and afterwards put into the Barrel, which conſequently muſt likewiſe render it much wholeſomer, than Drink fermented in the open Tun, becauſe by this Means it is furniſh'd with a great Plenty of its own original Spirits, that otherwiſe would certainly make their Eſcape, and the Liquor becomes flat and weak. So that in my humble Opinion (and I hope it will become general in a few Years) no Drink made from Malt will be eſteem'd, but what is brewed by infuſing or boiling the Hops a little while, according

to theſe my Directions, and work'd only in the upright Caſk, as I have here directed.

To forward Fermentation.

If you have but little, or if you have bad Yeaſt, mix a little Sugar, Flour, and Salt with it, and ſome warm Wort, or Beer, and it will raiſe it, and make it go a great Way in working Beers and Ales. So it will if mix'd with Grounds of ſtrong Beer, and will make it fit both to bake Bread and work Beers and Ales, and the ſooner if you let the Mixture lie by a Fire. But ſome for a Make-ſhift will mix only hot Water and Sugar with ſtale Yeaſt, and recover it fit for Service.— Others will knead Bean Flour with Water into a Dough, and put it into the Wort.— Or, if you put Wort in a Veſſel on its Grounds, it will ferment, provided it is not ſour; but the Grounds won't work the Wort if put among it in an open Tub.— Others when Drink is backward in working will put ſome Lime into it.— Salt, Pepper, and Flour mix'd together will make Drink work that would not before.— Powder'd Ginger alone will help.— Or Ginger, Brandy, and Flour mix'd together.— Or a Gallon Stone-Bottle fill'd with hot Water.— Or in Caſe you can get no Yeaſt, Honey, Sugar, Leaven, or Treacle, will do it alone.— Or Flour, Salt, and Whites of Eggs mix'd with Treacle.— Or by putting a Chafin-diſh of live Coals under the Bottom of a Tub or Tun.— Or by uſing ſome Salt of Tartar. But in particular be very careful not to break the young yeaſty Head, for this Cover helps the viſcid Body of the Wort to keep in the Spirits, for all Fermentation is much promoted by Reſt.— Alſo to ſupply the Want of common Yeaſt, in Gentlemens Houſes diſtant from Towns, I have heard, they cut and beat Iſinglaſs ſmall and fine, which being four Ounces in Quantity, they mix with two Quarts of ſtale Beer; then let it ſtand in Infuſion till diſſolved, but without ſtirring it; then draw or pour off the Beer, and keep the thick Part in a Pan before the Fire, ſo as juſt to keep it warm, and, in about two or three Hours Time, it will riſe, ferment and look like Yeaſt; and

then

then it is fit to uſe, either to work Drink with, or to bake Bread.— If your Yeaſt is ſouriſh, it will be apt to ſox your Drink.— If you work your Drink too hot, you may expect to have it quickly fall, and either ſox, or be flat, and ſuddenly ſtale.—You may make as much Yeaſt as will lie on a Crown-piece, work a thouſand Barrels, by firſt putting it into a Pint, then a Quart, and ſo on.— All new Drink muſt be tunn'd before it falls, or elſe it loſes its Spirits.— Some are ſo ignorantly covetous that they will reſerve out ſome raw Wort, and ſet it a working in order to ſave the Waſte of it in boiling; the Conſequence may likely cauſe a ſweet and bitter diſagreeable Taſte in the Drink, and afterwards bring it into a prick'd Condition.— Yeaſt will be good two Months together, if cold Water is put upon ſuch thick Yeaſt as it is ſettled at the Bottom of a Tub, and pour'd off once a Week, and freſh immediately put on.— Or, when the Drink is working put into the Vat a Whiſk, Haſle-rod, Broom, or a Branch of Juniper, or Furz, and let it lie all the Time it is fermenting; then take it and hang it up in a dry Place, and, though it be ſix or eight Months before it is uſed, it will be very ſweet and ſerviceable for the next Brewing.— Or bottle the Yeaſt after the Manner I have formerly directed.— Or when ſtrong Drink works ſlowly through the Viſcidity or Clammineſs of the fermenting Liquor, or Coldneſs of the Seaſon, a few live Coals or new-made Wood-aſhes will remedy that Inconvenience, by diſſolving the oleaginous Particles, and ſeparating them, the alcaline Salts in the Aſhes being excellently adapted for this Purpoſe; the ſame Effect will be produced by a little Salt of Tartar, or an Onion dipp'd in ſtrong Muſtard, or a Ball made of Quick-Lime, Wheat Flour, and the White of an Egg beat up into a Paſte, a Piece of which being thrown in will occaſion a new Fermentation: But theſe laſt are only to be uſed when you are ſure this Defect proceeds ſolely from the Thickneſs of the Liquor; for otherwiſe theſe volatile and fiery ſaline Subſtances will ſo break and divide the Texture of the Fluid, that with themſelves they will make way for all

the

the continual ſpirituous Particles to fly off at the Surface.

To cure new Drink damaged by the Froſt.

If you are neceſſitated to brew ſtrong Drink in froſty Weather, it is a great Chance but the Froſt takes it in the Working-vat, eſpecially if you ſhould let the Wort be ever ſo little too cold before you put the Yeaſt to it; there is then no preventing it. You may know when this Misfortune has happened to your Drink by its not working ſo kindly as others do; for it will ferment afreſh upon a ſucceeding Thaw, even if it has been in the Caſk for a Month or two, and a Froſt ſhould have continued all that Time; however this is a certain Rule to know it by, *viz.* when upon tapping it you find it very ſweet, ſomewhat like a Syrup (though you have allowed the ſufficient Quantity of Hops to it as uſual) and is commonly foul: Such Liquor will never be well taſted like other Drink, keep it ever ſo long, without uſing ſome Remedy.— The uſual one to a Barrel of ſuch Drink, is to make a little more than a Pail-ful of freſh Wort, into which put a good Quantity of rubbed Hops, and boil it about Half an Hour, ſo that it may be extraordinary bitter; and when it is cold enough, draw off a Pail-full of this damaged Drink, and fill up your Caſk with the bitter Wort in its ſtead, and it will work anew.— The Fermentation being over, ſtop it up, and let it ſtand for a Month, and if upon Trial you find it has come to, well.— But if it ſtill retains its ſugary Taſte, then get ready another Barrel ſweet and dry, into which rack off this Drink, and put into it Half a Peck of parch'd Wheat, and a Pound of good Hops gently dry'd before the Fire, rubb'd a little and tied up in a fine Net; this hang in your Barrel by a String faſtened to the Bung, which drive down tight, leaving only the Vent-hole open for a Day or two in Caſe any Fermentation ſhould enſue; afterwards ſtop cloſe, and, in three Weeks or a Month's Time, it will be cur'd and fit to draw.

N. B. The Pail-full of damaged Drink may be added to your Table-beer.

To check a forward Fermentation.

In *Northamptonſhire*, and many other Places, they reſerve a Piece of raw Wort for this Purpoſe, and to prepare it for keeping, they get it off the Lees as fine as they can, and lay it very thin, elſe it would ferment of itſelf by the Heat of the Salt and Sulphur contain'd in them. In Summer Time when the Beer or Ale ferments too high, they mix a Parcel of this raw Wort to lower it, and ſo on in the ſame Manner for ſeveral Days, which every Time adds new Viſcidities, that entangle and keep the ſpirituous Parts from flying off, at the ſame Time breaking the coheſive Principle into finer Particles, whereby it makes the Drink ſo much the lighter and fitter for a more eaſy Digeſtion: Contrary to that worſe Way of beating in the Yeaſt, and loading the Drink with a heavy, clogging, unwholeſome Matter: By which Management, the raw Wort will keep ſound more than a Week, and is ſo ſerviceable for improving Ale, that it is conſtantly practiſed throughout the Year; for in Winter they commonly heat their Parcels to invigorate the new Drink, that it may potently reſiſt the Severity of cold Weather; and then, as I have ſeveral Times obſerved, the Malt-Liquor will knit and ſparkle in a Glaſs, though drawn out of a Barrel. And I muſt own I think they brew the beſt Ale in this County of any other. So in the ſame Manner they ſerve their ſmall Beer that drinks extremely pleaſant. In Caſe your Drink works too violently in the Caſk (after my new Method) then run a Braſs Cock into the middle Cock-hole of your Butt, and draw out a Parcel, and, in the Room thereof, put as much raw Wort into the Bung-hole in the Head, as will ſufficiently check it, or burn Brimſtone under or about the Veſſel and it will do it directly.— Alſo Salt, Allum, Nitre, Spirit of Vitriol, Oil of Sulphur, Spirit of Salt, and all other Acids abate violent Workings of Malt-Liquors. For the reſt ſee my Firſt Part, *Page* 51, *Fifth Edition*. But, before I leave this Topic, I think it neceſſary to add the following Account, as it was related to me at *Norwich*, in *September*, 1736, by one

of

of the ſame Brew-houſe. The Tun-man, being ambitious to ſupplant the Workman Brewer, contrived to bring about his end by dividing a lump of Greaſe, and ſcattered the Bits into ſeveral Parts of the Tun, that then had a Guile of Nogg or ſtrong Beer working in it; and though the Brewer left it fermenting in fine Order, yet, when he came again, he found it all fallen flat, and only juſt covered with a thin creamy Head. Thus this Villain brought the Brewer ſeveral Times, into Diſgrace, 'till at laſt they ſuſpected and detected him in the Action, on which the Rogue fled.— When Liquor is of a thin Subſtance, and abounds with many ſubtile and very fugitive Particles, ſome thing of a groſs and viſcid Conſiſtence muſt be uſed to bridle and reſtrain their too great Activity; to which End, the White of an Egg and Wheat-Flour, old Yeaſt, and a cool Poſition, are very ſerviceable.

CHAP. XV.

Of Brewing Butt-Beer, *called* Porter.

THE Water juſt breaks or boils when they let in a Quantity of cold to keep it from ſcalding, which they let run off by a great Braſs-Cock down a wooden Trunk (which is fixed to the Side of the Maſh-tun) and up through a falſe Bottom into the Malt: Then maſh with wooden Oars Half an Hour; by this Time the Water in the Copper is ſcalding hot, which they likewiſe let run into the Malt, and maſh Half an Hour longer. This they cap and cover with freſh Malt, and let it ſtand two Hours; then ſpend away by a Cock-Stream into the Under Back, where it lies a little while 'till a ſecond Liquor is ready to boil, but not boil, with which they maſh again to have a ſufficient Length of Wort that they boil at once, or twice, according to the Bigneſs of their Utenſils. Others will make a third Maſh, and boil a ſecond Copper of Wort. The firſt Wort is allowed an Hour and a Half's Boiling

ing with three Pounds of Hops to each Barrel. The ſecond Wort two Hours with the ſame Hops, and ſo on. Some calling the firſt, *Hop-wort*; the ſecond, *Maſh-wort*; the third, *Neighbour-wort*, and the fourth, *Blue*. Which laſt, being a moſt ſmall Sort, is ſometimes allowed ſix or ſeven Hours boiling with the ſame uſed Hops. When in a right Temper they let down the Worts out of the Backs into the Tun from their groſſer Contents, where they cooly ferment it with Yeaſt, till a fine curl'd Head riſes and juſt falls again, that ſometimes requires twenty four, ſometimes forty-eight Hours, as the Weather is hot or cold to perform this Operation. Then they cleanſe it off into Barrels one Day, and carry it out the next to their Cuſtomers, keeping the Veſſels filling up now and then in the *Interim*. For making this Drink with a good Body, they commonly draw off a Barrel and a Firkin, or a Hogſhead, from a Quarter of brown Malt, and ſell it for twenty-three Shillings *per* Barrel. But this is govern'd by the Price of the Cuſtomer; ſo that two or three Sorts are ſometimes carried out from one Brewing, for with the Blue they can lower it at Pleaſure; always obſerving that the higher the Malt is dried the cooler the firſt Liquor or Water muſt be taken and uſed; therefore the firſt Wort governs the ſecond Liquor either to be hotter or cooler. If that was too hot you may know it by its bearing too great a Head or Froth in the Receiver, and ſo *è Contrà*; a middling Head ſhews the firſt Liquor to have been taken right.

CHAP. XVI.

An Account of the deſtructive Weevils, *with ſeveral Ways to deſtroy them.*

IN ſome Counties they call it *Bood*, others *Pope*, and *Whool*. It is a Kind of Beetle about the Bigneſs of a large Flea, and like a ſmall Ant, will crack under the Nail like a Flea, and will not only eat the Malt

Malt Kernel, but alſo, where they are in Abundance, will bite a Perſon in Bed, haunt the Cup-board, and even feed on the Plates where Meat has been eat on. Theſe Inſects are the Peſt of Corn-lofts, and are ſuch Travellers, that, when one is empty, they will preſently make their Way to another, unleſs the Granary ſtands independent of other Buildings. They do not breed in Winter, only in Summer, and then the Slackneſs or Dampneſs of the Malt, which by lying in a Heap heats, contributes to their Increaſe; ſo a Wall, that the Grain lies next to, by its giving in wet Weather, will cauſe a Moiſture and ſometimes have the ſame Effect; likewiſe, when Malt is kept two or three Years together in a Loft, the Duſt it acquires may bring on a Heat, and that cauſe the Breed of this Inſect. And, why the great *London* Brewers are not ſo much troubled with them as the Country, is, becauſe they are always emptying and receiving, that ſo diſturbs them as to hinder their Increaſe. A Brewer in the Country built a Loft that ſtood from other Buildings, and though he thought himſelf ſecure by this Means, yet was it not long before he had his hated Gueſts; for being neceſſitated to buy Malt at another Town, he ignorantly bought ſome Weevils or Whools in it, which to get rid of, he would not ſuffer any Malt to lie in the ſame ſix Months together; this anſwered his Purpoſe, for it ſtarv'd them quite. But where they are in great Numbers, and have Food enough, they will deſtroy a great Deal in a little Time, beginning at the End of a Kernel and ſo, eating into the Flour, ſpoil the Malt and deceive the Brewer; for theſe as they are nouriſh'd or increas'd by Putrefaction, and often unperceived ground with the Malt, and boil'd in the Drink, fox it, and cauſe it to grow ſtale and ropy, and thus are the Beginning of Corruption, which, like Leaven, is continually increaſing, till it has brought the Whole under a total Damage.

To prevent,—SCREEN the Malt now and then from the Duſt, and lay it dry againſt Boards, and empty your Loft in due Time.

To deſtroy great Numbers of them, and keep them under.— Is to ſhovel the Malt up into a Heap, and they'll all make up to the Top, by which you may take off the Major Part and ſift them out; then ſtirring and heaping the Malt again, you may repeat the Work.

A Second Way.— Leave a Peck or leſs of Malt or Grains on the Floor, and the Whools will come out to feed on them, when they may be ſhoveled up. They are moſt in Lofts at the latter End of the Summer Seaſon.

A third Way.— When the Loft is empty they will be apt to creep up and lodge on the Walls; in this Caſe, White-waſh with a Bruſh dipped in Water wherein Quick-lime has been juſt quenched, and it will kill many of them.

A fourth Way.— If the Room can be incloſed from Air, then you may deſtroy them by burning Brimſtone or *Guinea* Pepper in the ſame, but no Perſon muſt be in the Reach of it.

A fifth Way— Is to carry a good Parcel of Horſe-Piſmires, or the great black Ants, which you may ſhovel up with ſome of the Mould of the Hill, and put all into a Sack, which if you ſcatter in the Loft as ſoon as the Corn is out, they'll effectually kill the Whools, and afterwards leave the Place.

But, for further ſetting forth the deſtructive Nature of this poiſonous Inſect, take the following Account as it was related to me by a Servant who had been brought up under a Perſon from *Nottingham*, famous for brewing Malt-Liquors. A Victualler, hearing of this valuable Servant, uſed his ſtrenuous Endeavours to hire him. Accordingly ſucceeding, he employed him to brew a Quarter of Malt. The hot Water being in the Maſh-tun, he opened the Sack to put in the ground Malt, when, to his great Surprize, he ſaw vaſt Numbers of Weevils creeping in the ſame; however, he put in both them and Malt, and maſhed away, but in ſuch Pain from the fætid Stink of the Weevils, that he could hardly bare his Noſe over the Place, and reſolved never to brew there a ſecond Time; which he made good, and

re-

returned to his old Maſter again: An Example, one would think, ſufficient enough to open the Eyes of the ignorant Cit and others, who conſequently drink great Quantities of ſuch unwholeſome Malt-Liquors made from whooly Malts, as may be inferr'd from that I am going to ſay, *viz.* The ſmall Town where this happened lies above twenty-five Miles from *London*, and furniſhes large Quantities of Malt to that Place by the Waggon. Now according to the Opinion of ſome, all or moſt of their Malt-Lofts or Granaries in the ſame are infected by the Weevil, and have been ſo for many Years paſt, inſomuch that they deſpair of ever getting rid of this their conſtant Lodger. If then this horrid Creature breeds in ſuch Abundance in one ſmall Town, and accompanies the Malt alive both before and after grinding, even into the Maſh-tun, the Drinkers in courſe muſt ſwallow the Quinteſſence of their naſty Bodies; which before, on Sight of only one being cruſhed under the Nail, would be apt to turn his Stomach. And therefore it highly concerns all to be aſſured their Beers and Ales are brewed from ſound Malt, clear of that ſtinking Inſect, the Weevil. They likewiſe infeſt Ships, and are frequently found in their Bread, which theſe Inſects feed on as long as they can, and then die in it, and afterwards poor Tar is often forced to take up with it; hard Fare, when it won't afford even a Weevil any longer Subſiſtence.

CHAP. XVII.

Common Purl *improved by a famous new cheap Receipt now in Uſe.*

ROMAN Wormwood two Dozen; Gentian-root ſix Pounds; Calamus Aromaticus (or the ſweet Flag-root) two Pounds; Snake-root one Pound; Horſe-Radiſh one Bunch; Orange-peel dried, and Juniper-berries, each, two Pounds; Seeds or Kernels of *Seville* Oranges cleaned and dried, two Pounds. Theſe he cuts

and bruiſes, and puts them into a clean Butt, and ſtarts his mild brown, or pale Beer upon them ſo as to fill up the Veſſel, about the Beginning of *November*, which he lets ſtand till the next Seaſon. This he does annually, and ought to be follow'd by all of the Buſineſs.

N. B. Was he to add a Pound or two of Galingal-Roots to it, the Compoſition would be the better. This Victualler is of Opinion that there are ſcarce ſix in twenty of his Fraternity in Town, who do not make their Purl only with their Refuſe or Waſte-Drink, ſuch as they receive in their Tap-tubs, by throwing into it no other Bitter, but a Parcel of common weedy Wormwood; which Compound, one would think, more fit for a Puke, than a grateful, cordial, ſtomachic Bitter.

A Cure for the Gout *or Rheumatiſm.*

When I was at the City of *Wells*, the Town of *Bridgewater*, and ſome other Parts of *Somerſetſhire*, in 1737, I could not but lament the deplorable Condition of ſeveral Publicans whom I ſaw there miſerably afflicted with the *Gout*, which I think was chiefly owing to their ſtale, Butt, pale Beer, that here is their common ſtrong Drink. To one Inn-keeper, who a long Time was forced to walk with two Sticks, and another Bed-ridden, I gave the following Medicine that reſtor'd them, *viz.* Take one Ounce of clean Gum Guaiacum finely powdered, and put it into a Quart Bottle of right *Jamaica* Rum. Of this take Half a Quarter of a Pint or leſs as you go to Bed, and it will cauſe a ſmall Sweat, and perhaps a Stool or two. If it does not carry off the Pain in one Night, repeat it once or twice more. It is a very ſafe Remedy, curing both *Gout* and *Rheumatiſm*; and is now in great Reputation and Uſe among the Nobility in general; from one of whom I had this famous Receipt; which frequent Experience alſo warrants to be a moſt excellent one for any Degree of the Scurvy, and is accordingly now daily taken by many after the following Manner, *viz.* Infuſe two Ounces of the Powder in one Pint of old Rum; of this Liquor, put one or two Tea Spoon-fulls into a Glaſs of cold Water,

Water, and drink it at Night, or better in a Morning faſting.

Obſervations on ſome Country Drinks.

In *Suffolk* and *Norfolk* they run very much upon a light brown, or deep Amber colour'd Butt-Beer, which in the latter Place is called *Nogg*, is commonly ſold for Six-pence *per* Quart, and in ſome Parts is a light, good Drink: But then, like their Cheeſe where they make moſtly Butter, their common Ale is hardly fit to drink, as being generally made from the earthy Goods of the ſtrong Beer and its Hops. About *Rocheſter* in *Kent*, they brew a moſt potent, deep, brown, ſtout Beer, at four Pence *per* Quart, and which indeed beſt agrees with their brackiſh Water and bad Air. In *Somerſetſhire*, and ſome other Parts of the *Weſt*, they affect a pale Butt-Beer; and at *Briſtol*, beſides their ſtale Drink, a mild, cool-work'd common Ale is much in Requeſt for being of a deep Amber or light brown Colour, and ſo clear that they often bring it in Decanters: A Condition! That I could wiſh to ſee the hot-work'd *London* common brown Ale always in, that both it and the pale Yeaſt-beaten Ales, *&c.* may be free of that *Odium*, which Strangers are (but too juſtly) very apt to caſt on them. At *Bedminſter*, an eminent Quaker, who had got ſo much by the Diſtillery as to live on his Eſtate, told me he had rather brew in a Kettle, than drink the Town-brew'd Malt-Liquors; a Reflection which I think cannot take Place, if the excellent New-River Water, ſound Malt, an airy Brewhouſe, and a true Art were employed in the brewing of them.

CHAP. XVIII.

The Cellar-Man.

WOFULL Experience ſhews the Want of this Art in thoſe who are ignorant in a Cellar of Malt-Liquors, by the great Numbers of Veſſels of Drink which are annually damaged or ſpoiled on this very Account. For this Reaſon, ſome think that a well qua-

lified Perſon, who has under his Care great Quantities of Beers and Ales, is no leſs uſeful than a ſkilful Brewer; for though the latter is the prior Workman in preparing and finiſhing Liquors for the Cellar in a ſhort Time, yet is the former engaged ſometimes Years together to preſerve and keep in due Order his ſeveral Sorts, that their Owner may not ſuſtain any Damage by Leakage, ill-ſcented Caſks, Staleneſs, Ropineſs, Foulneſs, or any other Incident; but that through the Skill and good Management of this Perſon ſuch Liquors be improved even beyond that natural Order the Brewer left them in. On this Account alſo many Victuallers, as well as private Perſons, become Curers of their own Drinks, which by theſe Means they may improve after their own Taſte, without being confin'd to the Caprice of a Cooper, or the Niggardlineſs of his Maſter: For I know ſome Brewers that are ſeldom at a greater Expence than Elder-berries and Iſinglaſs for their brown Drinks, and but little otherwiſe for their Pale; which brings to my Memory the Expreſſion of a Perſon who invited his Friend to a good Pot of Drink; ſays he, if you'll go to a Houſe I know off, we ſhall be ſure to have right, for this Man never admits a Cooper into his Cellar.—Alſo at *Reading* in *Berkſhire*, I knew an Innkeeper there, who is ſuch an Artiſt as to ſupply the ſtarting Cooper's Place, and doctors his Beers and Ales ſo well, that the worthy, eminent Brewer he takes them of declared, when he taſted them, he could hardly believe they were the Drinks he ſold him, on Account of their being ſo much improved beyond thoſe in his own Store-houſe. So at *Newberry*, where are kept about two thouſand Barrels at a Time of pale or light Amber Beers in Cellars and Store-houſes belonging only to one Brewhouſe, they are ſo ſkilful and careful as to improve and preſerve them in a right Condition till their Vent at *London*, &c. leſſens their Number.

Of Foxing, Bucking, or Charning Malt-Liquors, Three *Synonymous* Terms for what in *London* they call only by the Name of *Foxing*; but in ſome Parts of the *Weſt*, by the other two. In my Second Book I thought I had fully

fully laid open this great Evil; however I find myſelf obliged to enlarge on the ſame in this Place, and ſay, that beſides the wooden, upright Pins, which faſten down the Planks to the Joiſts of the cooling Backs, and working Tuns, there lies between them Tow or Wadding drove in mighty cloſe, and is what ſome call *Corking*, to keep the Water, Worts, and new Beers and Ales from leaking through the Joints, which being of a ſpungy hollow Nature, eſpecially in hot, dry Seaſons, readily imbibe and very tenaciouſly retain any naſty Acidity that can make a Lodgment in it, and which fails not ſometimes to infect the ſucceeding Worts; before the Yeaſt is put into them; aad ſometimes in the working Tun there will appear a whitiſh Cream on the Top, and then the Drink receives the Damage before the Yeaſt can get Dominion of the Wort. When it ſo happens, there is no longer Doubt but that ſuch unnatural, poiſonous Fermentation has brought the Fox into your new Wort, Beer or Ale, and then cure it if you can. However as difficult as it appears, by having rendered abortive ſeveral Attempts that have been made to this Purpoſe, I ſhall endeavour to write ſuch Receipts, as I hope will contribute to its great Service, if not a Cure, and make ſuch damaged Drinks wholeſome and pleaſant.

Firſt Receipt.—TAKE a large Handfull of Hyſſop out of a Garden, and cut it ſmall; with this mix a ſmall Handfull of Salt, and put all into a Hogſhead of ropy Drink, and, in two Weeks, it will be clear, if you ſtir the Veſſel well when it is put in, and let the Ingredients remain to the laſt, ſtopping all cloſe directly.

Second Receipt—I KNEW a Perſon catch'd in his Brewing with this Diſeaſe, by means of a Tub that the Servant had uſed in waſhing, and put by without ſcouring or ſcalding; for all Soap naturally leaves a white Furr behind it on the Sides of the Tub, which by drying on increaſes its Acidity, and turns the Wort into what we call a *fox'd*, ropy Condition, in ſome Meaſure as Runnet does Milk. Now as Hops are of an active, rigid Nature, they are certainly an Enemy to the

ramous Quality of the corrupted Drink, by piercing and cutting through its cohering Parts. For which, take a Parcel of freſh, ſtrong Hops (according to the Quantity and Property of the Drink in the Veſſel) and put them into an earthen, glazed Plot, with a little Salt of Tartar; then pour on them boiling Water enough for the Hops to infuſe in like Tea, covering the Pot very cloſe to keep all Steam in. When cold ſtrain the Liquor off, pour it into your Veſſel, and ſtop it cloſe directly.

Third Receipt.—TAKE an Ounce of beaten Allum, with two of Muſtard-ſeed bruiſed, and an Ounce of raſed Ginger, likewiſe well bruiſed; put all into half a Hogſhead of fox'd, ropy Drink, and it will eaſier cure this Misfortune in the Barrel than in the Tun; becauſe, in the latter, the Efficacy of the Remedy will work off with the Yeaſt to a great Degree. This Compoſition will break the ropy Parts of the Drink, and fine it well.

Fourth Receipt.—I KNEW a great common Brewer experience a Secret that abſolutely cured his fox'd Drink, which was in the following Manner, *viz.* At every Brewing after he had ſtrained the Sweepings of his Coolers through a Flannel Bag (as they all do) he run through the ſame Part of his damaged ſtrong Drink, and put it into a Barrel by itſelf, and ſo on, ſome every Brewing till all was ſo done, and it proved an intire Cure.

Fifth Receipt.—TAKE Aſh, or rather Beechen Billets, and let their Aſhes run through a Wire-Sieve fiery hot into the Drink while in the Tun.

Sixth Receipt.—SOME ſlack Stone-Lime, and ſift it into ſuch Drink; but the Bay-Salt is beyond them all to prevent and cure this Diſeaſe, by uſing it as I have, in my Second Part, directed. For Salt of any Kind is an active Subſtance, ſaid to give all Bodies their Conſiſtence, and preſerve them from Corruption. It occaſions the great Variety of Taſtes that are, and will not ſuffer any Inſect to live in it, but like a Wall keeps the Body ſafe it is mix'd with againſt the Putrefaction of hot Airs, Liquids, Earths, or any oppoſite Contingent.

If

If you put foxed Drink into a Barrel, and let it remain ſome Time, the Veſſel won't be tainted by it, but will be ſweet and good on only waſhing it, firſt with cold, and then with ſcalding Water: The Reaſon is, the Joints of the Staves are ſo cloſe by the Force of the Hoops, that the Liquor has not Room to penetrate as in the ſquare Tuns and Coolers. But above all it is the diligent, cleanly Brewer that eſcapes this Damage, when the indolent Sloven is in for it. Of the firſt Sort, ſome are ſo curious, as I have ſaid, not to ſuffer a Pail to be dipped in cold Water, but to be ſcalded before it is uſed again. Others will allow a good Diſtance of Time before they can brew again, that the Utenſils may be thoroughly clean'd and dried; for all ſeaſon'd Tuns, Tubs, and Caſks are capable even of themſelves to excite and bring new Worts into a Fermentation in Time. So likewiſe Worts that are laid too deep in Coolers in warm Weather will ferment of themſelves, in no great Diſtance of Time, without the Help of Yeaſt: The ſame in Winter, though more ſlow; for this Reaſon ſome are ſo juſtly nice as to lay them but two or three Inches thick, while others will venture ſix or eight, to make haſte for the next Piece of Wort to ſucceed, and then often the Fox is bred. It is true, that it is beſt working Beers and Ales in ſeaſon'd Tuns and Tubs, becauſe the Powers of the former fermented Liquor that remain'd in the Wood will communicate its Quality to the next Wort, and impregnate it with its fermenting Parts, and ſo forward the Operations much ſooner than any new Back, Tun, or Tub, that will rather drink up its Spirits, work it more ſlow, and leave the Drink vapid and weak.

A Kilderkin of fox'd Drink cured.—A FORTNIGHT after it had been in the Veſſel, it was rack'd off into another, and then two Pounds of *Malaga* Raiſins were cut in Bits and hung in a Bag by a String, that at a Month's End were taken out, leſt after they had emitted their Sweetneſs an Acidity ſhould enſue; beſides which, a Mixture of Treacle, Bean-flour, Muſtard-ſeed bruiſed, and Allum powder'd, were added; which not on-

ly cured the fox Part, but alſo a burnt Tang that the Malt gave the Liquor.

A new Method of ſeaſoning new Caſks.—Put the Staves, juſt cut and ſhaped, before they are work'd into Veſſels, looſe in a Copper of cold Water, and let them heat gradually ſo that they muſt be well boiled, and in boiling take out a Hand-bowl of Water at a Time, putting in freſh till all the Redneſs is out of the Liquor, and it become clear from a Scum of Filth that will ariſe from the Sap ſo boiled out: Alſo take Care to turn the Staves upſide down, that all their Parts may equally have the Benefit of the hot Water. Obſerve alſo that in a dry, ſultry Summer the Sap is more ſtrongly retained in the Wood, than in a cool and moiſt one, and therefore muſt have the more boiling. Then when the Veſſel is made, ſcald it twice with Water and Salt boiled together, and you may boldly fill it with ſtrong Beer without fearing any Tang from the Wood.

Keeping empty Veſſels ſweet.—I knew a Perſon that brews his Drink for public Sale, ſo curious in this Affair, that though he has red Clay before his Door in Plenty, yet will never uſe it for ſtopping or bunging his Veſſels, ſaying it will make the Bung-hole ſtink in a little Time, even though it is mixed with Bay-Salt; and therefore makes Uſe of the wooden Bung I have deſcribed in my Firſt Book, which as ſoon as he has put into the Veſſel with ſome brown Paper, he directly mixes ſome Wood-aſhes with Water and puts it all about the ſame, with as much Care as if the Caſk had been full of ſtrong Drink, though it is done only to keep the Grounds ſweet while they are ſo. And thus a Veſſel may be preſerved in ſound Order near Half a Year; for it is the Air that makes them ſtink; but if the Grounds are ſtale or ſour before this is done, then it won't anſwer.

To ſweeten very ſtinking or muſty Caſks.—In my *Second Part, Page* 106, *Third Edition*, I have ſhewed the beſt Way of all others to cure foxed or tainted Coolers, Tuns, or Tubs, and here I ſhall do it for the Caſk, and that by ſeveral Ways. Firſt, I make a ſtrong Lee or Lye of Aſh, Beech, or other hard Wood-aſhes, and

and pour it boiling-hot into the Bung-hole, and repeat the ſame if there is Occaſion. This is a moſt ſearching Thing that will penetrate into the Pores and minuteſt Crevices, and overcome this horrid Misfortune. The ſecond is done by Malt-duſt boiled in Water, and immediately poured off into the ſtinking or muſty Caſk, where it muſt be well bung'd for ſome Time.— The third and beſt of all is, what I have thoroughly experienced to anſwer the full End of ſweetening a ſtinking or muſty Caſk, even beyond the Cooper's Firing; and that is to fill your Veſſel with boiling Water, near, but not quite to the Brim, and then directly put in Pieces of unſlacked Stone-lime, which will preſently ſet the Water a boiſing, that muſt ſtill be fed on with more Pieces till the Ebullition has continued Half an Hour at leaſt, but if very bad, longer: And after you have ſo done, bung all down, and let it remain till it is almoſt cold and no longer, leſt the Lime at Bottom harden too much, and it be difficult to waſh out. In this Manner you may make the Water boil in the Caſk as in a Copper, and by the ſubtile Salts of the Lime, it will make its Way into the Pores and Chinks of the Wood, ſo as to extirpate all ill Scent and Taſte, provided the Taint has not quite got through the whole Wood.—A fourth Way is to mix Bay-Salt with boiling Water, and pour it into the ſtinking or muſty Caſk, which muſt be bunged down directly, and let remain ſome Time to ſoak.—A fifth Way is to take the Head out of the Caſk, and burn ſome Pitch on a Chafing-diſh of Coals, clapping the looſe Head on again while the Fire burns: When this is done, burn ſome Frankincenſe in the ſame Manner to ſweeten the Veſſel, though Pitch of itſelf is not bad.

To preſerve brewing Tubs clean and ſweet.— A *Nottingham* Woman-Brewer is always ſo careful to keep her cooling Tubs ſweet and clean, that ſhe never fails, as ſoon as ſhe has done brewing, to rub the Inſide of them with a Bruſh and ſcalding Water; then ſets them by, and never fears the Fox. But if there is any Yeaſt or Furr left on their Sides, it is a Chance if the next Wort does not ferment into a creamy Head, and fox.

To fine, reliſh, and preſerve a Butt of ſtrong Beer.— TAKE a Gallon of Wheat Flour, ſix Pounds of Moloſſes, four Pounds of *Malaga* Raiſins, one Handfull of Salt; make it into Dumplins, and put them into the Bung-hole in the Head as ſoon as you have rack'd the Drink into another Butt.

To recover a Butt of flat brown Beer, and to fine and mellow ſtale, prick'd, and foul Drinks.— TAKE a Handfull of Salt, and as much Chalk ſcraped down fine and well dried on a Plate before the Fire; then take Iſinglaſs and diſſolve it in ſtale Beer till it is about the Conſiſtence of a Syrup; which ſtrain, and add a Quart of it to the Salt and Chalk, and alſo to two Quarts of Moloſſes mix'd firſt all together with a Gallon of the Drink, and put it into the Butt. Then with a Staff ſlit into four at the lower End, ſtir the rack'd Beer well about till it ferments, on which immediately ſtop up very cloſe, and in eight and forty Hours you may draw it.

To fine, preſerve, and reliſh a Hogſhead of pale Drink. TAKE one Quart of Oyſter-ſhells dried twice or thrice in an Oven, and then beaten to Powder; the pure, white Side is much the beſt; mix a Quart of it with one Ounce of beaten Grains of Paradiſe, and ſome Lemon-peel ſliced or ſhred ſmall, put all into a Hogſhead.

Another for the ſame Purpoſe.—TAKE Alabaſter, burn it, and beat it to a Powder; when cōld mix it with about an Ounce of burnt Allum, and a Quarter of a Pint of dulcified Spirit of Wine; put all into a Kilderkin of ſtrong Drink juſt before it is bung'd down.

To preſerve pale Malt-Liquors.— TAKE calcined Oyſter-ſhells and Crab's Claws beaten well, and boil in a Gallon of the ſame Drink, which when cold put into the Veſſel.

To fine and keep Malt-Drinks.— IT has been many Years a Cuſtom with ſome to do this by boiling, either Ivory, or Hartſhorn Shavings in the Wort; about one Pound to a Hogſhead I think will do. Moſt of it will diſſolve in the Liquor, for, after it is well boiled, there will be but little perceived. This not only fines the Drink by its glutinous Diſſolution, which by its Gravity drives

drives down the lighter *Fæces*, but it alſo preſerves it ſound and healthy by Reaſon of its alcalous Nature. However you muſt take care not to uſe it in too great a Quantity, becauſe it will certainly give the Beer or Ale an urinous Taſte, and alſo make it ropy.

To ſtop the fretting of Drink.— BOIL three or four Ounces of freſh Hops in a Bag a few Minutes, then dry them in the Sun, or otherwiſe, put them into the Caſk in which the Drink frets and it will cure it.

To fine, keep ſound, and add a Flavour to pale Drinks. TAKE white Pebble-ſtones and bake in an Oven till they crack, then beat them to a Powder, therewith mix a good Parcel of Syrup of white Elderberries, which are now pretty common (or Honey, but this is apt to turn acid) or Treacle: To this add Lemon-peel, and a few Sprigs of Clary if you think fit, while it is in Seed. Put theſe into a Butt of pale ſtrong Beer or Ale as ſoon as it is rack'd off, and ſtir all together well with a Paddle.

To fine and keep pale Drink from Fretting.— TAKE a Pound of Rice, dry it, beat it very ſmall with a Pennyworth of powdered Allum, and a Handfull of powdered fat Chalk; for Chalk is a great Abſorbent, and with other Ingredients carries down the *Fæces*, and keeps them from damaging the ſtrong Drink. But in Time the Salt and Sulphur of ſuch *Fæces* will tincture the whole Maſs to its Prejudice; therefore when the Drink is fine, rack it off, and feed it with Rice, Allum, and Chalk as aboveſaid.

To renew and fine the Bottoms of Caſks, or any flat Drink.—TAKE one Pound and a half of Sugar, and boil it in Water; when cold add a little Yeaſt, when fermented put it into a Firkin of ſuch Liquor, and it will ſet the whole a working, and make it drink briſk and pleaſant.

To recover ropy, flat, or prick'd Drink without putting any Ingredients into the Veſſel.— THEY roll and tumble the Barrel backwards and forwards up and down on a Stilling, till they thoroughly break the cake hard *Feces*, and thus bring the Liquor under a freſh Fermentation,

mentation, ſo ſtrong as almoſt to endanger the Head or Hoops flying off, if kept ſtopped. Then after it has ſtood a while and ſettled, they peg and try it. If once ſerving it thus does not anſwer, it muſt be repeated till it does. Once performing this Operation recovered a large Cellar full of ſtrong Beer in *Norwich*, which, though it was roped after an extraordinary Manner, and not ſaleable (but well taſted) yet by this Management they were courted for it, even by another Brewer, who bought moſt of it.

To fine any Sort of Drink.— TAKE the beſt ſtaple Iſinglaſs, cut it ſmall with Sciſſars and boil one Ounce in three Quarts of Beer; let it lie all Night to cool; thus diſſolved, put it into your Hogſhead next Morning, perfectly cold; for if it is but as warm as new Milk, it will jelly all the Drink. The Beer or Ale in a Week after ſhould be tapt, or elſe it is apt to flat, for this Ingredient flats as well as fines, and therefore is now more in Diſuſe than formerly; but remember to ſtir it thoroughly well with a wooden Paddle, when the Iſinglaſs is put into the Caſk.

A ſecond Way.— PUT two or three Handfuls of ſmall red Gravel, or, better, ſcouring Sand into a Barrel, ſtir it well about, and it will anſwer.

A third Way.— BOIL a Pint of Wheat in two Quarts of Water, then ſqueeze out the liquid Part through a fine Linnen Cloth. Put a Pint of it into a Kilderkin, it not only fines but preſerves.

To fine pale Drinks, A fourth Way.— GET a Powder from the Sculptors or Image-makers, and mix it with a Diſſolution of Iſinglaſs. This Diſſolution is made after the Proportion of one Pound of Iſinglaſs diſſolved in three Gallons of ſtale Beer, by ſtirring it well now and then with a Whiſk in the cold Drink; and, which is an Allowance for fining three Butts, with a ſufficient Quantity of the Powder.

A fifth Way.— SOME Brewers put, for fining and heightening the Colour of brown Beer, five or ſix Quarts of pick'd Elder-berries into a Pail of Iſinglaſs Beer. In Time they will diſſolve in the Beer, or you may

ſqueeze

ſqueeze and ſtrain then through a Sieve, and then it is fit for Uſe.

To fine and feed Drink, A Sixth Way.— TAKE the Whites of three Eggs and their Shells, and mix with Flour of Horſe-beans made fine (that have been ſplit and dried on the Kiln) but none of the Huſk, and ſome clean Brandy, make it all up with ſome Treacle, and put it into a Kilderkin.

A ſeventh Way.— THEY will take Hops that have been boiled twenty or thirty Minutes in a firſt Wort, and dry them again; then put Half a Pound into a Kilderkin, and it will fine it very vell; and are better than freſh unboiled Hops; becauſe theſe will gather, ſome into a Head and ſome ſettle, and ſo are apt to foul the Drink in Draught. Others have uſed green Hops off the Vine, when they have been near ripe, and put into a Veſſel, that anſwered very well.

An eighth Way.— IT is the Practice of a certain Man whenever he happens to have any Drink too ſtale, to put ſome ſcalding Water on Hops under Cover; where after having infuſed ſome Time, he puts all into the Bung-hole to fine, recover, and preſerve the ſame.

To keep ſmall Beer without Hops.— ANOTHER uſes no Hops in making his ſmall Beer, all the Winter eſpecially, but inſtead thereof, mixes a Penny-worth of Treacle with a Handful of Wheat and Bean-flour, to which he adds a Penny-worth of beaten Ginger, and kneads it into a due Conſiſtence, which he puts into a Hogſhead and bungs up.

The Method of a private Family to improve their Drink.— THEY never tun without putting a little Salt and powder'd Ginger mix'd together into it.

Muſty Drink, Is occaſioned by muſty Veſſels; it is cured by running it through the Grains.

To preſerve Drink that is to be ſent abroad.— DRAW off the Ale, or Beer, into a clean Caſk; then pound ſome ſlit, dried Horſe-beans, free off their Hulls, till they are well powder'd, or made ſo by grinding them in a Mill: With this mix a little Yeaſt and knead it; then dry it by a Fire; but not in an Oven, becauſe it may

may be too hot for this Uſe. The Quantity of a ſmall Dumplin will ſerve a Hogſhead.

To recover prick'd ſtale Drinks.— For this ſee my Second Part, *Page* 115. *Third Edition.*

To help decayed Drink.— Some will put the Aſhes of Beech into a Bag which they will let hang in the Liquor by a String, and bung cloſe; ſome put Horſe-beans into the Drink to preſerve it mellow, but too many will give it a diſagreeable bitter Tang.

To recover thick, mummy Drink that is acid.— Make a ſtrong Hop-tea with boiling Water and Salt of Tartar, and it will do by adding it to the reſt; or rack a Veſſel of mummy Beer into two Caſks, and fill them up with new Beer brewed not ſo ſtrong and it is a Cure.

Vamping Malt-Liquors.— Is of late much in Practice for its excellent Service in recovering, preſerving, and fining ſtrong *October* and *March* Beers in particular; becauſe by a new Fermentation the whole Body of the old Drink is renewed and brought under a freſh Nature; and thus a Butt of ſuch Liquor need never ſuffer damage or be ſpoiled by Staleneſs or Age, ſince you may alter the Caſe at Pleaſure. The Way to do it is thus: Divide your Butt into two by racking it off, then fill both up with new Drink of the ſame Sort, and in three Weeks or a Month you may draw it off fine.

The new Way of managing ſtrong Drinks, from the Tunning to the Drawing.— To do this there is more than one Way uſed. One Perſon I know never ſtops the Cork-hole of the upright Butt, but lets it alone a Month, two, or three, till he perceives the Drink well ſettled, and then racks it off into another Butt, with two Pounds of new Hops, which he immediately ſtops up at both Bung and Cork-hole.

Another leaves his Cork-hole open only a Month, and then ſtops it up; then about a Month before he draws for good, he takes out a little of the ſame Beer, and puts it on two Pounds of rubbed new Hops, which he pours into the Caſk, and ſtops all cloſe and ſecure.

Another lets his large Caſk of three Hogſheads ſtand, with an open Vent, ſix Months, only with a

Peice

Peice of brown Paper paſted before the Cork-hole; and then he puts in two Pounds of Hops that had been boiled but twenty Minutes in a firſt Wort, and dried, and one good Handful of Salt; then directly ſtop all up very cloſe, and in about a Month's Time it will be fit to draw fine and be briſk to the laſt. But others are ſo nice in this Point, that, inſtead of keeping theſe boiled Hops dried by them, they ſo contrive to brew, that they may have them directly, to put into the Caſk of Beer which they want to fine down, juſt as they are done with; and ſay, that for this Purpoſe an uſed Hop boiled but a little while, is better than an intire dry one, becauſe the former will ſink and drive down the *Fæces* preſently, when the freſh ones are apt to remain on the Top. On theſe Accounts People differ; ſome will fine without Racking, others will rack before they fine; ſome will uſe Salt, others none but Hops. But when they intend to tap their Butt-Beer at four Months old, they always uſe Salt in the Hops: For Salt ſtales Malt-Liquors in four Months, as much as twelve Months Age will do without it. And as for the leaving open the Cork-hole Vent, I am of Opinion, that Malt-Liquors digeſt and maturate in the Caſk in ſome Meaſure as Food does in the Stomach, and thus become more fitted for the animal Secretions by a due Age, which muſt be more or leſs according to the Strength of them. Therefore it is the practice of ſome not to ſtop up the Cork-hole for ſix Months together, on Purpoſe to expoſe the Drink all that Time to the free Admiſſion of the Air, which will ruſh in, and, by its Elaſticity and Preſſure, throw down the groſs Particles, keep it from fretting, and thereby fine and ripen it the ſooner.

Racking off Malt-Liquors.— DREGS (in my Opinion) conſiſt of the earthy and farinaceous Parts, mix'd with the acid Salts of the Compound the Liquor is made up of, and intrinſically contain no Spirit but what they abſorb from it; which Salts not being fixed are capable by ſundry Cauſes to be incited into Motion, and ſo cauſe extra Fermentations, which, when frequent, ſo exhauſt the

the Spirit of the Drink as to get the Aſcendant, and render it vapid, ſour and ill taſted. But I remember the Aſſertion of a certain Perſon to be otherwiſe, who ſaid that the Lee of any Liquor is the ſtrongeſt Part of it, but moſt and ſooneſt ſubject to ſpoil and corrupt, and ſo long as that holds good the Liquor feeds on it, but after ſuch a critical Time it will ſpoil the Drink, and this he ſays is the Cauſe for Racking; but how reaſonable this is I leave others to determine. Some are ſo curious in the obſervation of this, that they won't draw off their Drink into another Caſk, before it has paſſed a ſecond Fermentation in the firſt Butt, and this happens ſooner or later, as the Quantity of *Fæces*, the Temper of the Air, and the Place it ſtands in are; the Crown of Yeaſt that lies juſt below the Cork-hole (while it remains on) ſecuring it from taking Damage ſeveral Months together; and when they don't rack it, ſuch Beer is accounted in beſt Order when it is drawn after the middle Hole is ſtopped up, becauſe it has the greater Feed from the remaining *Fæces*. Obſerve alſo that the Caſk you intend to receive your rack'd of Liquor in, ſhould always be firſt ſeaſoned by the Steam of a Brim-ſtone Rag, which will effectually ſtop its Fermentation and fine it. I muſt likewiſe hint that it is too common a Way with ſome to drive the Braſs Cock with a Hammer or Mallet into the middle Hole of the Butt, and then very likely the Crown of Yeaſt falls down, and the Drink grows vapid, flat, and thick; ſo alſo are thoſe liable to the ſame Inconveniences who thus inconſiderately peg a Caſk.

A general Mixture for preſerving, fining, and reliſhing Malt-Liquors.— TAKE one Penny-worth of Treacle, Powder of fat dried Chalk, Bean-flour, Wheat-flour, Oyſter-ſhell-powder, Pebble-ſtone-powder, of each a Handful; one Quartern of *French* Brandy, and two Ounces of powdered Ginger; knead all together into four or five Dumplins and put all into a Butt of rack'd ſtrong brown Beer; and to reliſh it, you may hang a Penny-worth of Orrice-root, and ſix Pounds of chopped Raiſins

Raiſins in a Bag faſtened by the Bung: But theſe two laſt ſhould be taken out at a Month's End. If for a Butt of pale Beer, inſtead of the Treacle, you may uſe a Syrup made with white Sugar.

To correct any predominant Acidity in Malt-Liquors. THE beſt Thing is to buy of the Druggiſt, Mr. *Walmſley* on *Snow-hill*, or others, ſome of the Oyſter-ſhells which have been collected from the Sea-Shore, and there, by the Sun, calcined to a Whiteneſs. Break theſe in a Mortar into Pieces of the Bigneſs of Six-pence or a Shilling, and put them into the Liquor; for, if you powder them, the leaſt Motion will be apt to make them riſe and foul the Liquor, which by this Means is prevented and the Work done full as well. Chalk and other *Teſtacea* will anſwer the ſame, but not ſo well, becauſe they all more or leſs will give the Drink a diſagreeable Taſte.

Cloudy Beer accounted for, and its Cure.— THIS is a Misfortune attending both pale and brown ſtrong Malt-Liquors, more of late Years than in Time paſt, and that in many Places in *England*; but moſt of all in *London*, where it cauſes frequent Returns from the Cuſtomer to the great Prejudice of the Brewer, and is occaſion'd by the Hop and Malt. Firſt by the Hop, which contributes to it by emitting its oily Body in long boiling to the Wort, and the longer the Ebullition is continued, the more you draw out its heavy oleaginous Body, that conſequently fouls the Drink, and hinders its Fining; for though it may depoſite its groſſer Part, yet will this oily one always be in Motion, not only to retard the *Fæces* from ſubſiding by inveloping them in its tenacious Body, but is afterwards alſo endeavouring to gain the Aſcent (as the Nature of Oil is) but this it cannot thoroughly do, becauſe of its intimate Union with that of the Malt in the Percuſſions that the igneous Particles produce in Boiling. This I take alſo to be the Reaſon, why Grains of Paradice have puzzled ſome Brewers to account for their conſtantly fouling the Malt-Liquors they are boiled in, to increaſe its Strength,

and that ſuch Drink always remains ſo, notwithſtanding their moſt accurate Attempts to the contrary. So that, if theſe are to be uſed, the only Way will be only to infuſe them as well as the Hop, as I have before obſerved.

N. B. THE aforeſaid oily Matter not being rightly managed and digeſted, I take to be the Cauſe of, and Caſe of cloudy Beer, and therefore reſiſts and will not incorporate with the Forcing of Iſinglaſs.

Secondly, WHEN this Evil proceeds from pale Malt, it is occaſion'd by its being too ſlack dried, or rather by its being cruſted without-ſide by the Violence of the Fire, when the Inſide is full ſlack or almoſt raw; and as thus the Malt-Kernel is in two ſeveral Conditions, ſo is the Liquor made from the ſame in two different Orders, as is plain from the View of ſuch cloudy Beer in a Glaſs, known by holding it up, and then it will appear bright and clear, but hold it down, and it will appear fouler and of a grey, wheyiſh Colour. So the brown Malt, that of late Years, ſince the Invention of the Plate-Kilns in particular, the Kernels are made to crack, bounce, and fly up by the Vehemency of the Heat, whereby they dry two or three Kilns in the Time they uſed to do one, which makes ſome Part of the Malt parch'd or burnt, and the other Part raw or under dried, and which very probably may be the Cauſe of cloudy Drink, that by many is thought incurable.

To cure cloudy Beer.— RACK off your Butt; then boil two Pounds of new Hops in a ſufficient Quantity of Water with a due Proportion of coarſe Sugar, and put all together into the Caſk when cold; and it is far better than a Pap made with Rye-flour and Malt-ſpirits as ſome are for. Others have attempted this Cure by only ſoaking new Hops in Beer, which, when ſqueezed, they put into a Caſk of cloudy Beer.

Another Way to cure a Butt of cloudy Beer.— TAKE twenty Pounds Weight of baked Pebble-ſtone Powder beaten very fine, with the Whites of twelve Eggs, and Bay-ſalt powder'd to the Quantity of a Handful; beat

and

and mix theſe very well with two Gallons of the Beer, and pour all into the Butt of Drink ſtirring it ſoundly; and after three or four Days at moſt it will be fine, then draw it off its Lees: Thus you'll have a clean, fine, well-reliſhed Drink, free of that flying diſagreeable Lee that before poſſeſs'd the whole Body of the Liquor, and which otherways would have remained in the ſame to the laſt.— I have ſeveral more uſeful Curioſities in the Art of Brewing to communicate when I have tried ſome, and got the compleat Knowledge of others.

Cautions relating to Malt-Liquors.

Firſt, *Of the Sediments or Fæces of* Malt-Liquors.— As theſe abound with the acrid Salts of the Malt, whenever the Drink is in too ſtale a Condition, it ſhould be rack'd off before any of the aforeſaid preſerving, fining Ingredients are put into the Caſk: Becauſe, in this Caſe, it is a Chance if ſuch corrupted *Fæces* do not get the Aſcendant of the deſigned Antidote, and help to corrupt that, as it has before done the Beer. For not only the *Fæces*, but the whole Body of the Drink will conſequently oppoſe the Remedy, and if they be Major, the Attempt will prove abortive.

Secondly, SALT and Allum muſt be uſed with great Precaution, becauſe they potently induce Staleneſs in Malt-Liquors in a little Time, if mixed in too great a Quantity with other Ingredients that are to be put into the Caſk, and ſo are apt to overcome their alcalous Parts. Therefore ſome will uſe no common Salt this Way, but throw a Handful or two of it into the Maſh-tub among the Malt, to preſerve the Liquor ſound while it lies with the Grains; and thus the Salt is thought to loſe Part of its ſharp Nature by its being ſtrained through the oily Part of the broken Kernels; but even this has its Inconveniency, as it is apt to retard Fermentation.

Thirdly, *Of Stone Powder*.— THIS by ſome of the Brewhouſe Coopers is made uſe of for fining down their Butt-beers, and is very good when it is a little burnt, becauſe then it becomes a Sort of Lime, and its

fixed Salts are thereby made to yield their Virtue to the Drink. But when the Powder of a ſoft Stone unburnt is uſed (as too commonly is done with a Mixture of Iſinglaſs) then it gives the Liquor an earthy, raw, unpleaſant Taſte, and unwholeſome Quality, which will ſpoil other good Ingredients it is incorporated with; as I knew once done by a Perſon who had made a Compound of ſeveral in good Order, that were all damaged by this, to the great Prejudice of the Beer.

Fourthly, *White of Eggs.* THESE certainly will clear, feed, and preſerve Drink, if mixed with Wheat-flour, *&c.* but then it ought to be conſidered that the Whites are apt to corrupt in Time and do Damage, where the Drink is not very ſtrong and able to preſerve them ſound; beſides if in this Caſe too many of them are uſed, they may bring the Beer into a ropy Condition, or give it too raw a Taſte: Some therefore when theſe are to be uſed will boil them up in Water and Sugar to a fine Syrup, and then ſuch Syrup of Sugar will be advantageous in preſerving as well as clearing the Drink when mix'd with other Ingredients.

Fifthly, *Egg-ſhells, and Crab-claws.*— THESE like all the other *Teſtacea* are of an alcalous Nature, but more eſpecially ſo when the crude Part of them is taken away. Therefore to cure theſe and make them fit to be put into the Caſk of Drink, bake them a little, and then you may either mix them with other Ingredients, or uſe them alone, by Way of preſerving Beers or Ales againſt Staleneſs.

Laſtly, *Oyſter-ſhells.*— THESE are likewiſe a great Alcali or Abſorbent, and are of particular Service in the Management of Malt-Liquors, eſpecially if uſed in the Manner aforeſaid; but ſhould by no Means be uſed crude or unprepar'd: Therefore as many as are not capable of purchaſing them from the Druggiſts, let ſuch firſt waſh and wipe them dry, then bake them two or three Times in an Oven after Bread is drawn, beat off their brown Part and break the White into ſmall Pieces for Uſe.

Bottling Malt-Liquors.— THIS is certainly a great Improvement if performed in a right Time and Manner, becauſe Drink thus confined is more free from Air, Heat, and *Fæces*, than in a Barrel, which often expoſes its Spirits to Loſs by Vent and frequent Drawings out. But the greateſt Improvement of all is, when Drink becomes flat and deaden'd by the Caſks abſorbing its Spirits, or that the Sediments have attracted them, *&c.* In all which Caſes Bottling often recovers the Liquor and re-eſtabliſhes it in a greater Fineneſs, Purity, and Briſkneſs than ever, and eſpecially if an additional proper Food be allowed it, that will give it a long Duration in a ſafe, mellow, and cool Condition, and the ſurer if kept from Head and cork'd well. In this Œconomy particular Regard ought to be had to the Age of the Liquor, that it be full ripe and not too young when it is bottled; if it is, very likely it will throw out the Cork or burſt the Bottles; which to prevent, cork looſe at firſt, and afterwards firm; and if after this a Ferment is perceived, looſen again. Stone Bottles are not ſo good as Glaſs, becauſe of their rough Inſide, that is ſooner apt to furr, taint and leak, their Mouths uneven to Cork, and their Sides not to be ſeen through. Some are ſo curious as to uſe the Glaſs Stopple inſtead of the Cork, which, if rightly fitted, admits of no Penetration, as is well known to the Chymiſt, who by this Means retains the Spirits of his fiery Liquors in the beſt Manner. You may for a Day or two after bottling keep the Bottles in cold Water or in a cold Place, or have ſome cold Water now and then throwing over them, to prevent any Ferment coming on, leſt the Air, by being thus cloſely confin'd, ſhould break the Bottles, when a Cork in the Room of a Glaſs Stopple would ſave them, as being of a porous Nature. Glaſs Bottles are ſweetened and clean'd either by hot or cold Water; if ſtinking, put them in a Kettle of cold and boil them, but do not put them down while hot on a cold Place, leſt they crack; then lay them on dry Boards Straw, or Cloth; if dirty, waſh with hard Sand, ſmall Stones, or better with

with Shot. Some ſteep Corks in ſcalding Water to make them more pliable to the Mouths of the Bottles; and to fill up their Pores, and for a further Security faſten them in with ſmall iron Wire twiſted about, after the *Herefordſhire* Faſhion, that they practiſe in bottling their Styre Cyder. Weak Drink ſooner breaks Bottles than Strong, becauſe the Liquor has not Strength enough to detain the Spirits. To preſerve Drink in Bottles lay them Side-ways, it keeps the Cork moiſt, the Air out, and confines it to the Side, where it cannot eſcape; a Way much better than putting the Mouth downwards in a Frame; for then, if there be any *Fæces*, they will come out at firſt. Putting Bottles in Sand in ſome meaſure keep them from the Power of the Air, but this is not quite ſo good as if they were kept in Water, which prevents Fretting or Fermentation, and adds a Strength to the Drink by its intenſe Coldneſs, which likewiſe checks the Activity of its Spirits, and by its cloſe Body keeps out Air, eſpecially if it is Spring-Water. For this Purpoſe, in many Cellars there may be Tanks or Ciſterns made to hold Water either with Stone or Brick by the Help of Plaiſter of *Paris*, or with a cementing Compoſition made with Oil, new ſlacked Lime, and a little Cotton-wool, that will harden the more, the longer the Water lies in them: Or lay ſuch Stone or Brick in a Bed of Clay beaten and trode very fine before, ſo that it may be a Foot thick at leaſt on all the Sides and Bottom, as the Brewers order their Tuns; and to empty them at Pleaſure, a Hand-pump of a ſmall Size may be made uſe of; or in Cellars there may be large Holes made in the Side-Walls that will contain a Number of Bottles, as is commonly done in the Country, and the nearer theſe are to the Ground the better the Liquor will keep. But if this Way is too troubleſome, little Vaults may be built in the Cellar, arch'd over, that may be made ſo cloſe as to keep out much Air, and ſo prevent the Damage, that Drinks are ſubject to from their changeable Nature: On the contrary,

trary, if you have a Mind to have your Bottle-drink ſoon ripe, keep it above Ground.

When Malt-Liquors are to be bottled off, obſerve the following Directions. Common, ſtrong, brown Beer of eight or nine Buſhels to the Hogſhead, brewed in *October*, may, if free and clear of Ferment, be bottled off at *Midſummer*; pale ſtrong Beer, brewed in *March*, may be bottled off at *Chriſtmas*, under the ſame Proviſo: But always forbear this Work when it is muddy by Change of Weather, or the Falling down of the Crown of Yeaſt, becauſe then the Drink goes through ſome Alterations that thicken and work it in a ſmall Degree, which cauſes the Lees at laſt to receive the Spirits, that are hereby made ſmaller by the Tranſaction, and from hence the Liquor is fed till it is ripe for Bottling. To feed bottled Beer or Ale there are ſeveral Ways. Firſt, put three Horſe-beans into each Bottle of ſtrong Beer, and it will preſerve it mellow a long Time. Secondly, put into a Quart of Spring Water Half a Pound of Sugar (the finer the better) and a Penny-worth of Cloves; boil all together moderately Half an Hour, and ſcum it well in that Time; when cold, put two Spoonfuls into each Bottle that is to be kept long, and three to be drank ſoon; it is ſuch a great Improvement that it is generally made uſe of by ſome Publicans to recover their Tap-droppings, which it will do in two or three Days, if the Bottle is kept in a warm Place. I know a Perſon that puts a little Oil on the Top of the Drink in Bottles, in Imitation of the *Florence* Wine-flaſk, without any Cork, and it keeps it from Wind in a very lively Order. To keep Bottles from burſting, make a Hole in the middle of the Cork with a Nail or Awl, and the Bottle will never burſt, yet will keep out the Wind, becauſe the Moiſture of the Drink will ſwell it: Or put into each Bottle one or two Pepper-corns, and it will never fly. The common Way of making Drink ripe preſently is to boil ſome coarſe Sugar in Water, and when cold, work it with a little Yeaſt; of this put two, three, or four

Spoon-

Spoonfuls into a Bottle with two Cloves over Night, and if it ſtands in a warm Place, it will be ready next Day, and be very apt to ſwell the Belly of the Drinkers with its windy, unwholeſome, yeaſty Quality. Others will do this Feat more quick, even in the Time a Mug of Liquor is bringing out of the Cellar, though it be Tap-droppings; they will put a Piece of Diaper or Damaſk over the Pot or Mug, and with a Jerk turn it Topſey-turvy and back again, which, with a Jolt or two more, will cauſe a frothy Head in Imitation of bottled Drink. Or if Drink is a little prick'd or fading, put to it a little Syrup of Clary, and let it ferment with a little Barm, and it will recover it; and when it is well ſettled bottle it up, putting in a Clove or two with a little Lump of Sugar into each Bottle.

A PRIVATE Perſon uſed to bottle off a clear Ale, by boiling a Bag of Wheat in the Wort. Another would put a Spoonful of ſugar'd Water into each Bottle. Another would have clear Drink to bottle off, by putting two or three Chalk-ſtones into the Barrel, or Powder of Chalk.

THUS by trying frequent Experiments, of adding more or leſs to any of the foregoing Receipts, according to your Palate, you will arrive to the Knowledge of diſcerning at firſt View what every particular Subject requires or will bear: And remember that all Liquors muſt be fine before they are bottled, elſe they'll grow ſharp and ferment in the Bottles, and will never be good.

The End of the Third Part.

A

SUPPLEMENT

TO THE

LONDON *and* COUNTRY

BREWER.

CONTAINING,

I. An Account of BARLEY and MALT, and the Method of deſtroying that Miſchievous Inſect the WEVIL.
II. The Method of Brewing ALE and BEER, as practiſed throughout *England*.
III. A Receipt for making BALLS for fining, reliſhing, colouring, and preſerving MALT LIQUORS.
IV. The Buſineſs of the CELLAR-MAN, and the Method of preſerving Veſſels ſweet, and improving them in the Caſk.
V. Of colouring PALE-DRINK BROWN, and BROWN PALE.
VI. Of WATER and its PROPERTIES in Brewing.
VII. Of curing ROPY, FOXED, MUSTY, PRICKED BEER.
VIII. Two Ways of Brewing OCTOBER BEER.
IX. Of ELDER TREES, and the Method of procuring LARGE BERRIES.
X. Of SCURVY-GRASS ALE, and SHIP-BEER.
XI. Of Brewing MALT LIQUORS by private Perſons.
XII. Of the WIRE MALT-KILN.
XIII. Of WATER.
XIV. Of MISCELLANEOUS MATTERS relating to the BREWING, WORKING, and ADULTERATING MALT LIQUORS.

WITH

Several curious OBSERVATIONS taken upon the Spot, by the AUTHOR, in his four Years Travels through the ſeveral Counties in *England:* Likewiſe a curious Letter from a Phyſician, diſcovering ſome ABUSES in the BREWERY, explaining the Nature of Yeaſts, and the unwholeſome Effects of it, when beat up with MALT LIQUORS.

PART the Fourth and laſt.

By the AUTHOR *of the Three former Parts.*

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BRITISH MUSEUM

CHAP. I.

Of Barley *in General.*

IF it is carried in as ſoon as mowed, it will be ſteely, and not make good Malt, becauſe it ſhould lie in the Field till it has had a ſmall Fermentation, which will cauſe the Kernel to bite mellow; therefore all Barley ſhould have two, three, or more Nights Dew while it lies in Swarths or Cocks: For then the Ground draws it, and the Dew moiſtens it, and both impregnate the Kernel with a nitrous Quality, which fits it for a kind Sprouting, and cauſes it to yield a greater Increaſe of delicate Malt, than if cut one Day and carried in a Day or two after. After this it requires a due Sweat in the Mow before it is fit for Malting. A judicious Malſter ſaid, he would not give ſo much, by five Shillings a Quarter, for raw Barley, as he would for that which had laid long enough in the Field to meliorate, before it was houſed; nor is ſuch crude Barley ſo fit for Seed, though it may grow, but it will not improve like the other. This makes the *Fulham* Farmer cock his Barley in the Dew, to make it white, mellow, and ſoft, and improves it by a gentle Fermentation. White Ground returns the beſt Barley for pale Malt; gravelly for a thin-ſkinned Corn, that will yield well, and make right Amber Malt; Clay, for a big Kernel, thick Skin, and poor Increaſe. Barley begins to ſweat in the Mow in a Week or two, and holds it three, or four, as the Grain is moiſt or dry, and the Mow bigger or

leſs; when it is over, the Top that was ſo wet, that Water might be wrung out of it, will be all dry, and change ſometimes in forty eight Hours Time, from wet to dry; for Sweating begins at Bottom, and ends at Top. If you diſturb the Mow, while it is ſweating, you do Harm; becauſe you then check it, and prevent the Kernel's due Melioration; but if you threſh it out before it ſweats, and lay the Barley in a conſiderable Body in a Bin, it will perform its Sweating there; but if it has not its regular Sweat, in one Place or the other, the Corns will be ſteely, and make but a bad Sort of Malt: Of this many are ſo wary, that to be ſure of the Barley's paſſing through a regular Sweating or Fermentation in the Mow, they will not buy any till near *Allhollow-Tide.*

That Barley which had no Rain fell on it in the Field, and has been got in intirely dry, requires a Water more, and a longer Soaking in it, than that which was got in damp. An ignorant Maltſter having a Sample of Barley brought to him, that was got in exceeding dry, refuſed to give the beſt Price for it, ſaying it was too hard to make good Malt; when another more ſkilful bought it, and ſaid he never had more Increaſe, nor better Malt, than from the ſame Barley; becauſe he allowed it a longer Time, and a Water or two more in the Ciſtern than uſual. Where Turneps have been eaten off, the Barley ſown on the ſame is commonly attended with a high Colour, and not eſteemed ſo good, as that from off a pure Tilth.

In ſome wettiſh Seaſons, Barley has been ſo badly got in, that it would not work kindly till about *Chriſtmas*; and though this has been often the Caſe, yet becauſe it ſeldom happens, or becauſe there is ſome extraordinary Neceſſiity for the Uſe of new Malt, too many begin at *Michaelmas:* As it happened in 1739, when a great deal of Barley, in the Weſt and North Countries, lay in the Fields till about that Time; but then

then the Conſequence was, that it came very irregularly, and never made worſe Malt.

To know good Barley.—EXAMINE the Root End with your Nails, part it, and, if it be good, the Flour will look of a whitiſh blue Caſt, and be a little moiſt, tho' the major Part of the Kernel is dry. If it be bad Barley, the ſame Place will look reddiſh, be ſteely, and ſeem deadiſh. When Barley is inn'd wet, it will heat or burn in the Mow to that Degree, that if ſuch Barley is broke at the Root End, it will be blackiſh, and when ſo, it is unfit to make good Malt. Ground Barley, if uſed in the diſtilling Way, will ferment ſo well in temperate Weather, as to produce a ſixth Part more of Spirit than if worked in the greateſt Extreams of Heat and Cold.

Of Malts in General.—GREAT Quantities of brown Malt are dried on the Plate Kiln for a wholeſale Trade, without a Hair-Cloth, and then, in four Hours Time, with only one Turn, which, in a regular Way, ſhould not be leſs than eight or more: Thus, by the Fierceneſs of Fire, the Plate, Tyle, and Wire Kilns ſo diſtend the Kernel, as to ſhake the Skin of it ready to burſt, which is called *Blowing*; and then ſuch Malt ſeldom fails of having many Corns, with a bitteriſh, brown, burnt Flour. Whereas good brown Malt, that ſome Maltſters make for their neighbouring Country Cuſtomers, is twelve Hours in drying, and turned once in three. A Perſon told me, that he gave thirty Shillings a Quarter for Barley, and ſold the Malt made with the ſame at twenty-five, and got more by it than any he ever had ſold, ſo great was the Increaſe cauſed by thus hollowing the Barley Corn. This made a great Vender of Malt Liquors ſay, there has been but little good Drink brewed ſince theſe Plate and Wire Kilns have been invented. Contrary to this too quick Way is the ſlow Cockle-Oaſt Kiln, which dries Hops or Malt with hot Air, the ſweeteſt of any Way; and that by Means of the four caſt Irons, I wrote of in my laſt Book, in which they burn common Sea-Coal, whoſe

foul, offenſive Smoke is conveyed away by a Chimney over their Mouth, through Flews of Brick-Work, faſtened to the Sides of the Walls, which encompaſs the Hair-Cloth-Wooden-Kiln: The only Objection is, that this is too tedious a Way, and therefore more chargeable than others, and the rather, becauſe the Flews muſt be opened to be cleared of the Soot once a Month; but what is this five or ten Shillings Charge, perhaps, ſix Times a Year, and ſomewhat a ſlower drying than the common Way, in Compariſon of making ſome hundred Quarters of Malt, in one Seaſon, in an excellent ſweet Condition? An eminent curious Gentleman ſaid, if he could enjoy a wholeſome, fine, pleaſant Malt Liquor, he would not grudge the Charge of having his Barley picked Kernel by Kernel, and his Malt dried in the moſt coſtly Manner. He alſo was a nice Perſon, that had his Malt dried on Leads, thro' Glaſs Windows, by the Sun only; as it was performed by one in *Suſſex*. Another in *Warwickſhire* did it openly on the Leads of a Church; yet Malt may be too ſlack, as well as too high dried, and then neither have their Cure; therefore, to be at the greater Certainty, the Amber Malt is in the greater Eſteem with ſome. The beſt Pale Malt is dried with Coak, Charcoal, or *Welch* Coal, or with Coak and *Welch* Coal together, and the beſt Brown with Wheat Straw. The beſt Coak is made at the Pits, becauſe there the Coal is biggeſt, and ſo the largeſt *Welch* Coal exceeds the ſmaller Sort; ſome think the fineſt Sort of the latter comes from *Laurana-Creek*, in *Milford-Haven*, out of the Lord *Cornwallis*'s Eſtate there, and is the heavieſt, by being loaded with Block-Tin, with which it abounds, will heat quicker, and laſt longer than any other Sort. Some Maltſters, to improve the ſmall Sort of *Welch* Coal, ſift it thro' an Oat-Riddle, then work it up with Water, in Shape of a Brick, and dry it in an Oven. So in *Nottinghamſhire* they ſift their ſmalleſt Pit Coal, and work it up with Cow-Dung, in Form of Bricks, in the Summer Time; and in Winter they dry their

their Malt with them, but theſe are inferior Fuels to the large Coal or Coak. Wood Fuel is made uſe of in ſome Kilns, which though it yields a bad Smoke, that gives an unpleaſant Tang to the Malt, and its Drink, yet, by Skill in the Management of it, its unpleaſant Quality may be much leſſened. At *Baconsfield* I have taſted a tolerable good common Ale, brewed with a Mixture of ſix Buſhels of pale Malt, dried with Coak, and ſeven Buſhels of Brown, dried with Beech Wood. Others again, will dry a light Amber Malt, with ſome Coak, and ſome Beechen Billet-Wood burnt together, and of this I have drank good But-Beer at *Newbury*; others burn *Welch* Coal and Wood together. When Wood is employed this Way, the ſooner it is cleaved, the ſooner will the Sap dry out, and the leſs it will ſmoke; for which Reaſon, ſome prefer the ſmall Bruſh Wood. A great Maltſter, near *Southampton*, aſſured me, that he found two Years old Haſle make as good pale Malt as any Fuel, becauſe the Bark is thin; next to this, he ſaid, is two Years old Beechen Billet, and the next Aſh; but this, having a thicker Rind, is apt to burn blacker, and ſo is Oak. In ſome Parts of *Kent*, the Aſp is in great Eſteem, for this Purpoſe, becauſe it does not ſplit or crack like Oak, and ſome others. Charcoal makes the whiteſt Malt, but has the ſtrongeſt Sulphur, and therefore gives a Tang; *Welch* Coal is better, and Coak beſt of all, but are both liable to the ſame Objection. Wheat-Straw under a Hair Cloth is reckoned the beſt Fuel by moſt, Rye-Straw next, and Wheat-Haulm worſe, becauſe it is often got in damp, with Weeds, Moſs, and Dirt; Fern indifferent; Furz not ſo good; Oat-Straw burns away preſently; Barley-Straw does the ſame, and ſmothers too much; Fern is almoſt as good as Wheat-Straw, provided it is mowed the Beginning of *Auguſt*, when it is brown-headed and full ripe; then it muſt be turned once or twice, and houſed, and uſed the firſt Year; but if it is two Year old, and well preſerved, few can know the Difference, if it is managed

right in burning. Wheat-Straw, indeed, muſt be allowed the ſweeteſt of all ſoft Fuels, and exceeds its Stubble, becauſe that grows neareſt the Ground, and has the largeſt Knots, and the more Knots the more Sap, and conſequently the more Smoke; and, when it lodges Dirt, Wets, and Weeds, it becomes ſtill worſe, but if well got in, it is good Fuel. In the Iſle of *Thanet* they leave it the longeſt I ever ſaw any, and that on Purpoſe to enjoy the more Barn-Room for their Grain, and make it more ſerviceable for drying Malt, thatching Houſes, and Stacks of Corn. Rye-Straw is near the Nature of Wheat-Straw, and makes a ſtrong Fire. Some account Barley-Straw a good Fuel, becauſe it is a weak one; and the weaker the Fuel, they ſay, the ſweeter it dries; but one Load of Wheat-Straw will go further than two or three Loads of this. Furz is too fierce a Fire, as its Stalks, being large, retain a conſiderable Deal of Sap, which renders it of ill Conſequence to the Malt. Beechen Billet, if laid abroad in a Stack, the firſt Year, and houſed the ſecond, will burn with little Smoke. Oaken Wood ſmokes and blacks the Malt, but by ſeveral Years lying abroad in a Stack, the Sap will be waſted, and do leſs Damage. In ſome Places they dry Malt with Peat, and, at a certain Town, a Perſon had a Contrivance to dry with burnt Clay, without Smoke. Coak and *Welch* Coal give a fine Coat to Malt, or elſe many would not make Uſe of them, becauſe of their Sulphur. Some out of a curious Fancy have made a Reed of their Wheat-Straw for drying Malt, becauſe their Ears, being full of Chaff, would elſe burn with a little offenſive Smoke; but threſhing it firſt ſoundly ſupplies that, and ſoftens the Knots. In *Kent* and *Surry*, it is common to put the decay'd Hop-poles under Shelter for two Years, and then burn them to dry Malt, and theſe they call a good Fuel, and likewiſe old dried Crab, Apple, and Beech Wood. At a certain great Town in *Suſſex*, a common Brewer and Maltſter dries his pale or light amber Malt on a bare Tin-plate Kiln,

with

with Charcoal, and now and then an old Beechen Billet with it: For this Perſon refuſes a Hair-Cloth, alledging, he is of Opinion, that it gives the Malt a Fox'd Tang. But, as I have before hinted, the fineſt Way of drying Malts (the pale Sort eſpecially) is to do it in a Cockle-Oaſt-Kiln, with Sea Coal burnt in a Cheſt of four Irons, which heats the Air, and dries the Malt; to which, to make a quicker Diſpatch, ſome will add other Fuel near the Cheſt, and I muſt needs ſay, that this excellent ſweet Way ought to be ſo far encouraged as to make it more common, that we may enjoy more healthful and pleaſant Liquors than at this Time we do; not but that the drying Malt by only the Sun is certainly the cleaneſt Way of all others; but then the ſame hot Seaſon will not admit of its being prepared for ſuch a Drying. I have heard, that the laſt Making of a Floor of Malt has been dried on the ſame Place, by turning it often, and laying it very thin, ſo that it has bore Grinding; this was told me by a Gentleman, who drank of the Drink made from the ſame Malt. The Stone-Kiln is now much in Uſe in ſome Parts of *Wiltſhire*, for drying Malt on that, and a Hair-Cloth over it, as performing the Work with leſs Fire; but ſome object, that they can't check it ſo ſoon as others. There is ſuch a diſagreeable Sulphur in Elm, that the Smoke of it is very pernicious, if employed in drying Malt, and therefore it is every where rejected. In ſome Parts of the Eaſt, they light their Fire in an Oven with Broom and Sticks, till it is hot enough, when they throw in their *Newcaſtle* Coal into an open Oven, and burn it twelve Hours, into a Coak, in which Time it will become a perfect Cinder, fit to take out, and will then be all in a Cake, which they break and divide into pretty large Pieces with an Iron-Peal for their Uſe; when one Oven-full is drawn, they charge it again, and ſo on; with this Cinder on Iron Bars they dry their pale Malt, and their brown with *Newcaſtle* Coal in a Cockle-Oaſt. Pale Malt, eſpecially, will be damaged, if the Fire is made too hot

at

at firſt, for then it enters into the Body of the Kernel too ſoon; but by drying it about half the Time with a gentle Heat, and then increaſing it gradually the reſt of the Time, the Fire cannot hurt the Malt; and it is a general Rule, among the beſt Artiſts, for the Improvement of this Sort, as well as the reſt, to give it a briſker Fire, the laſt Hour, in order to mellow it, make it keep, give the Drink a good Reliſh, and cauſe it to be fine the ſooner: On the contrary, if pale, amber, and brown Malts have only one Sort of Heat to the laſt, the Drink will be flat and deadiſh. And now, being on the Subject of Malts, I ſhall here take Notice of a Make-ſhift Way, as it is practiſed in ſome Parts of *Wales*. They wet the Barley at Home, and in ſeveral Tubs, with a Stick or Plug in the Middle of each, and a Wicker Baſket about that, as in a Maſh-Tub, to let the Liquor out at Pleaſure; when they have changed the Water once or twice, and it is ſoaked enough, they draw the Water from it, and leave it a Night to drain; and they take it out and let it lie in an Heap, on a Floor, over a Kitchen to ſpire; next they ſpread and turn it ſeveral Times, then ridge it up: Thus, if the Weather is warm they turn it three or four Times a Day, at laſt they ſend it to be dried at the Kiln; if the Weather is moderate, they are three Weeks about it in all. This Way an Inn-keeper followed at *Llanſawell*, in *Caermarthenſhire*, who thus has made ten Buſhels of Malt at a Time. In buying Malts take Care the Acre-Spire be not run out too much, for then the Spire will fill the Buſhel too ſoon, and drink up the Wort inſtead of increaſing it; for this has been kept on for that Purpoſe by ſome, who, to do it the more effectually, have ſprinkled Water on the Malt, to make it hold on till it was put into Sacks: The Root-ſpire likewiſe will be ſo many Tails to increaſe the Meaſure, but this laſt being coarſer than the other it is eaſier perceived. Right Malt ſhould only juſt ſprout up with the Acre-ſpire, but when 'tis run out too far, and then broke off, the Kernel will be bunchy

bunchy at the End; yet it is neceſſary that the Root-ſpire firſt, and then the Acre-ſpire ſhould ſhoot from the Middle of the Barley Corn, each a contrary Way, and in a true Degree, elſe it can't be made into good Malt; but, above all, take Care you are not impoſed on with wevilly Malt.

A further Account of the Wevil or Whool, its Miſchief and Remedy.—AT *Wincheſter*, they call this Inſect, *Pope*, *Black-bob*, or *Creeper*. About twenty Years ago, when they had none other than brown Malt here, if they had a Wevil in it, and it was known, no Body would drink the Beer that was made of it; but now they have got into the Uſe of pale Malt in general, they are much infeſted with them, from the Moiſture and Heat that accompany its ſlack Drying. By taking off the Top of the Heap to grind firſt, the Breed of the Wevil is much prevented, becauſe all Sweat riſes moſt to the Top; and if they have taken the Malt Heap, another and better Way is, to let ſuch Malt run out of a Loft on a Wire-ſcreen, ſtanding ſomewhat ſloping, which will let the Duſt and Wevils through it, and, as they fall upon the Floor, they muſt be carefully ſwept up and killed, and, if any ſhould eſcape and creep up the Walls, they muſt be ſerved in like Manner, and, if Occaſion requires, this Method muſt be repeated; and by this you may deſtroy them all, as a great Maltſter of my Acquaintance does, and who thinks this the beſt Way of all others: And indeed all Malts, that are kept in large Quantities, ſhould be thus ſerved at leaſt twice in a Year, if it were only to preſerve it from the Heat of Duſt, and from the Breed of the Wevil: For their Deſtruction ought to be endeavoured with the utmoſt Diligence, ſince, as Dr. *Cromwell Mortimer*, Secretary to the Royal Society, told me, the Wevil is ſomewhat of the Nature of *Cantharides*, for, if applied Poultice-wiſe, they will raiſe a Bliſter like them, and cauſe a Strangury, from the great Plenty of Animal Salts theſe ſmall poiſonous

ous Inſects abound with; but of theſe I have wrote more largely in my three former Books.

A Person ſent a Parcel of Malt out of the Country that was very much eaten by the Wevil, and refuſing a low Price for it by the Factor in *London*, it was kept ſo long, that it was ſold for four Shillings a Quarter to give the Hogs, for the Wevil had eaten out moſt of its Flour. At a certain Town about 28 Miles from *London*, an Inn-keeper had twenty Sacks of Malt ſent in from the Maltſter for his Brewing; but not uſing it preſently, the Wevil became ſo predominant, that they appeared in vaſt Numbers on the Outſide of the Sacks, which put the People into ſuch a Concern, that they had all the Malt new ſcreen'd, and got a Buſhel of Wevils from it, which they carried into a Field and burnt. They ſaid, the Malt looked white to the Eye, though moſt of the Flour of the Kernel was eaten out by the Wevil; and that, where the Wevils are in conſiderable Numbers among Malt, both ſtrong and ſmall Drink, made of the ſame, will very much intoxicate, cauſe a moſt violent Head-Ach, and make the Perſon grievouſly ſick, as many of the Inhabitants in this Town find, by woeful Experience; for here is little other Malt to be had but what is damaged more or leſs by the poiſonous Wevil. A Maltſter, who kept his Malt two Years by him, in hopes of a riſing Market, had the Misfortune this wet Summer, 1739, to have a little Rain come through the Thatch on the Malt-Heap; but it was not long before the Moiſture bred the Wevil, that he could not prevent increaſing, but by often ſcreening it, and laying it very ſhallow on the Floor to keep it cool.

CHAP.

CHAP. II.

Water, *its Properties in* Brewing.

NEAR and below *Kingſton*, on the River of *Thames*, there are ſeveral Ruſhy, Willow, and Ozier Plantations, or *Eights*, as they there call them, which, about *Lammas* Time, rot and ſhed their Seed, and in time their Leaves. It is then this River Water, in theſe Parts, is ſo faint and ſickiſh, that, if it is not ſkimmed, boiled, hopped, and worked well, the Drink will preſently ſour.

AT *Coſſum* near *Portſmouth*, they have a brackiſh Water, cauſed by the Ouzing of the Sea-water. A Barber, coming here to live, heated it in cold Weather, to make it lather as uſual, but to his Surprize he found it would not, till he boiled it half an Hour, and then it lathered well; yet at *Petersfield*, which is an Inland Town, they are of Opinion, the more they boil their ſoft Water, the harder it becomes, becauſe they ſay, the ſoft Parts fly away in Vapour, and the ſaline hard Parts ſettle, and are the ſame that cruſt the Pot and Kettle: Nor is any Water without ſome Share of Salt in it, though Rain Water has the leaſt of all; and even this has been found, by Experience (as Dr. *Godfrey* obſerves) to keep forty Years, that was at firſt catched in a Glaſs Veſſel, and never ſuffered to ſtand near any Vegetable, and it was believed would have kept longer. So diſtilled Water has kept good ten Years in a Glaſs, and this was thought likewiſe would have kept longer, had it been tried. It has been further obſerved, that all Water naturally breeds a Muſt, which is a Sort of Muſhroom, and is cured by Boiling. Of this Element we ought, in ſhort, to be moſt careful, becauſe it is the only Catholick Nouriſhment of all Vegetables, Animals, and Minerals; therefore, at *Kingſton*, at this Time of the Year, they refuſe the *Thames* Water, though it comes up to their

their Town, and brew with another ſmall River Water, that comes to them out of the adjacent Country. So, at *Ipſwich*, their Well-water, in the lower Part of that Town, is tinctured, about *Michaelmas* and *Allhallow-Tide*, from the Sea-water and muddy Shore which lies near it, that unleſs they firſt boil it very well, and their Worts ſoundly afterwards, their Drink will neither work kindly nor taſte pleaſant; and ſome, on this Account, have been forced to brew their Worts over again with freſh Malt, to make their Sixpenny brown But-Beer thoroughly cured, otherwiſe it would not keep a Month together ſweet, and yet with ſuch good Management I have drank excellent Sixpenny But-Beer here. To ſoften ſuch Water, put Wheat Bran with it into the Copper, and it will ſoften it beyond any Thing. At another Place near the Salt-water, their common brewing Water is ſo brackiſh and ſharp, that they are obliged to boil their Wort ſeveral Hours, elſe it will ſtink in a Week's Time. The *Thames* Water at *London* is fattened by the Waſhings of Hills and the Sullidge of Streets, which give it a thick Body and muddy Taſte, and therefore it fines well, and makes moſt Drink with leſs Malt. At *Chard* in *Somerſetſhire*, at the upper Part of this Town, there ariſes, out of a flinty Rock, ſo ſoft and ſpirituous a Water, that it will preſently raiſe a Lather over the Tub; and therefore they allow but eight Buſhels of Malt to make one Hogſhead of their But pale Beer, which they ſell at 4 *d.* a Quart, when at *Elminſter*, three Miles diſtant, their Water is ſo much the worſe, that they allow nine Buſhels to a Hogſhead, and ſell it for 5 *d.* a Quart, though not ſo good as the *Chard* Beer, in my Opinion.

Degrees of Heat in Water uſed for the firſt Maſhing. —Hot Water or Liquor, for amber or brown Malt, by many is taken three Degrees this Side boiling: That is, when the Water is very hot, and the Fire ſtirred; if then there ariſe a white Cloud, it is Time to let it run on the Malt, or better, firſt into the falſe Bottom.

Bottom. And for pale Malt the Water is heated into the next higher Degree of Heat, which is when the Water appears in ſmall globular Particles, or little Bubbles which ariſe on the Top, and then it is juſt Time to let it run into the falſe Bottom, or on the Malt, for on this firſt Liquor depends the chiefeſt Part of Brewing. Old Malt requires the Liquor to be taken ſharper than for new, becauſe the old is more reſinous and of a cloſer Texture than the new. In ſome Places in the North, they are apt to blink or give a little ſouriſh Taſte to their Drink, by taking their Water in too low a Heat, eſpecially in cold Weather. In ſome Places in the Eaſt, they generally heat their firſt Water juſt fit to ſcald a Hog, and then let it run into the falſe Bottom, and, after ſtirring the firſt Maſh half an Hour, they let it ſtand three Hours; the next Liquor they take boiling hot, the third the ſame, for brewing their But light brown Beer, or what they there call *Nog*, which they ſell at 5 *d.* and 6 *d.* a Quart; for it is a Maxim amongſt them, that, if they can take their firſt Liquor right, they don't fear miſſing any of the reſt. A Country common Brewer, of my Acquaintance, never uſes above three Liquors for his ſtrong Beer; but there are ſeveral of the great Brewers who uſe no leſs than five.

The Norfolk *Brewing.* — Here it is common to brew Forty-two Buſhels of Malt at a Time, by Innkeepers, for making three Barrels of Sixpenny brown But-Beer, or Nog, and upon the ſame Goods three Barrels of Ale, and three of Small Beer; twelve Pounds of Hops are allowed for boiling with the firſt, the ſame Hops ſerve again for the Ale, and the ſame again for Small Beer; the ſtrongeſt Wort ſome boil four Hours, the Ale two, and the Small Beer one; here they lay a great Streſs on the Hop, as believing its Strength not only preſerves the Beer, but ſaves Malt. Some are ſuch Votaries for Wheat-malt, that they ſay, four of this will go as far as ſix of Barley-malt, becauſe it contains much more Flour, and is of a finer

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Nature than the other: Smutty Wheat is alſo ſometimes uſed, becauſe it is cheap, and, after it is diveſted of its Smuttineſs in Malting, makes good Drink. At *Saxmundham*, *Norwich*, *Attleborough*, &c. I have drank a fine, light, brown excellent Nog, or But-Beer; but as to their Ale, I think it is the worſt I ever met with; and no Wonder, ſince it is made from the dirty, phlegmatic, refuſe Malt and Hops, for ſo are the Natures of theſe Vegetables after their firſt Spirit is extracted or drawn out of them, and which, conſequently, renders them very unwholeſome to the Body of Man; hard Caſe then it is, where no other Sort th n ſuch Ale can be bought by the weary Traveller: Oh! what Advantage accrues to many Publicans, merely through the Neceſſity or Ignorance of their Cuſtomers, whereby they are licenſed, as it were, to brew and vend all the Year great Quantities of unhealthy, dirty, inſipid or Yeaſt-beaten Ale and Small Beer, to the ſhortening of many Lives. This Caſe is ſomewhat parallel to that of the *Suffolk* Dairy, where they make the beſt Butter, there they make the worſt Cheeſe.

Briſtol *Ale and Beer*.—HERE they are under the Inconveniency of an indifferent Spring-water, occaſioned by its lying near the Salt-water, and yet they brew a good Sort of Ale and Beer. In many Places of this City they draw their common brown Ale in Decanters, at 4 *d.* a Quart, and it is a pretty clear mild Drink; and ſome of their beſt Beer is exceeding light and pleaſant. Theſe People, I muſt ſay in their Praiſe, are generally very induſtrious, and willing to be informed of any Thing that may tend to the Improvement of uſeful Arts and Sciences.

Rocheſter *Beer*.—HERE they have rather a better Water, which they uſe in brewing a heavy ſtrong But brown Beer, which is potent enough, if that would do, to keep off the Seizure of an Ague: But Woe be to the Patient, if he can get no no other than ſuch Drink in the hot Fit!

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A certain Welch *Woman's Way of Brewing a Hogs-head of Beer.* She has two Coppers, that will hold a Barrel or more each, and two Maſh-Tubs; when the Water is juſt ready to boil, ſhe takes out a Pailful and throws it into the Tubs to ſeaſon them; next ſhe ſlackens the Fire, and puts over a Pailful of cold into the Copper to temper it, for, if it goes over too hot, it will bind inſtead of opening the Pores of the Malt, and ſpoil the Drink; then ſhe puts a Pailful or two of this hot Water into a Tub, and a Buſhel of the beſt pale Malt on that, which ſhe ſtirs well, and then puts it into the Maſh-Tub, and ſo on till all is thus mixed, except half a Buſhel; this Method is to keep the Malt from balling, and get as much Goodneſs out of it as ſhe well can in a ſhort Time, for, if one Ball of dry Malt is left in it, it will ſour all the reſt: Then ſhe maſhes altogether, which, when done, ſhe puts over the reſerved half Buſhel as a Mantle or Cap, and then ſhe lets it ſtand three Hours with a Covering over the Tubs. Now here are ſix Buſhels of Malt in the firſt Maſhing-Tub and eight in the other; and it is ſo ordered that the eight Buſhels are maſhed an Hour later than the firſt, becauſe, as ſoon as the firſt Wort is ready to boil, or juſt boiled, ſhe lades over the eight Buſhels, a little at a Time, and lets it run off on about twelve Pounds of Hops till ſhe has her whole Quantity, which, when boiled with the Hops about a Quarter of an Hour, ſhe puts in a Bowl of cold Wort, and in a little Time after another; theſe Parcels of cold Wort will ſoon make all of it break, and that ſometimes in leſs than half an Hour; and then the Flakes ariſe, which is the oily Part of the Malt, cauſed by the igneous and ſharp Particles of the Fire and Hop, for no Wort will break ſo ſoon without Hops as with them; thus ſhe proceeds by alternate Heatings and Boilings of Water and Wort and Maſhings till ſhe has her Quantity, without being hindered of having her Water and Wort ready in due Time, as is commonly wanting where there is but one

Copper to one Maſh-Ton. This Drink ſhe keeps one Year before it is tapped.

A ſmall Brewer's Method to free his Hops from the boiling Wort at Pleaſure. At *Darking* in *Surry*, a Perſon makes uſe of a thick iron Hoop about two Feet wide, and a Net faſtened to the ſame two Feet deep, with four ſmall Cords tied to a larger one, by which, with the Help of a Pulley, he draws the Net and Hops out of the Wort at Pleaſure, in order to boil his Wort longer alone, till it is curdled and broke enough.

The Bridgwater *Way of Brewing.* Some boil their Wort and Hops an Hour, others till the Hops are all ſunk, for longer they ſay thickens and gives a high Colour to their pale But-Beer, and the thicker it is, the longer it is fining in the Caſk; after the Hops have been uſed in their ſtrong Drink, they throw them away, as every one ſhould do, and uſe their next ſmall Wort inſtead of the firſt Water for brewing Ale, or more ſtrong Beer from freſh Malt, which they call *Doubling*.

The Elminſter *Way of Brewing.* Here they brew all their *October* But-Beer with pale Malt, and here the Publican, who brews his own Drink, allows nine or ten Buſhels to the Hogſhead, and five Pounds of Hops; to a Hogſhead of Ale eight Buſhels of Malt, half pale and half brown, and two Pounds of Hops in Winter, and three in Summer. Here they work their ſtrong Drink altogether in the Caſk during the Summer Seaſon, and not firſt in the Ton, as believing ſuch open Working loſes too much of the Spirit of the Liquor, and makes it poor and flat; but in Winter they ferment a little firſt in the Kive or Ton to put to the Wort in the Barrel, from whence moſt of the Yeaſt will work out. Here they lodge the hully Part of a Buſhel of Malt about the Plug or Baſket in the Middle of their Maſh-Tub, and the floury Part of the ſame Buſhel they uſe in Capping, and lay it all over the Top; otherwiſe, when they brew with ſome Sort of new Malt, they ſay they cannot make the hot Water run fine enough through the ſame, and becauſe the

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Flour of all Malt, eſpecially if it is ground very ſmall, is apt to waſh to the Plug-Baſket, and thereby cauſe a foul Wort to run off. Here they believe that Boiling Worts and Hops too long makes the Drink thick, flat, and heavy; becauſe, in ſuch Boiling, the mucilaginous Parts may become predominant and fixed.

CHAP. III.

To brew a Barrel of Family-Ale *with four Buſhels of Malt, as it was performed at a Gentleman's Houſe, with only one Copper, and one Maſh-Tub and Cooler, in* Auguſt 1739.

IF your Maſh-Tub holds two Barrels, it is better than a leſſer one, that there may be room enough for Maſhing; in ſuch a one fix a Braſs Cock of three Quarters of an Inch Bore in a Tapwhips, or do it by Plug and Baſket; but I prefer the firſt, if there be no falſe Bottom, which certainly is the beſt Way of all others. Let it be ſoft Water to brown or amber Malt, covered with three or four Handfuls of Malt or Bran, if the Water is thorough clear; if not, put as much Salt, and nothing elſe, as will lie on a Crown-Piece, into a Copper that holds at leaſt one Barrel, containing thirty-ſix Gallons, and as it heats and the Scum riſes, take it off before it boils in; then, when it has had a Wallop or two, lade two Pailfuls firſt into the Maſh-Tub, and put two Pailfuls of cold Water into the Copper in their room, and juſt boil all again; then convey all the hot Water into the Maſh-Tub, and, when you can ſee your Face in it, mix the Malt a little at a Time. Waſh, and let all ſtand two Hours under a Cover of Cloths; at the End of which, run a driſling Stream, and faſter by Degrees, on a few Hops, to ſecure it. While the firſt Wort is ſtanding and running off, another Copper muſt boil to clean Veſſels, and what is

uſed this Way, is to be ſupplied by adding more cold Water and boiling it again, two Pailfuls of which are to be thrown on the Goods as the firſt Wort runs off; theſe four Pailfuls of hot Water are allowed for the Malt to drink up, never to be returned, being a Bucket to each Buſhel; and thus the Brewer had near a full Barrel of firſt Wort come off, which he boiled with half a Pound of Hops till it broke firſt into very ſmall Particles, and then into bigger, till the Flakes were as large as half a Silver Penny. Now, as ſoon as the firſt Wort had run off from the Maſh-Tub, the ſecond Copper of boiling Water was put over the Goods and maſhed, which ſtood one Hour before it began to be diſcharged; and, while this was ſtanding and running off, the firſt Wort was boiled and put into Coolers, and a third Copper of only heated Water was thrown over the Grains, as ſoon as the ſecond Wort was ſpent off, which alſo was maſhed; and, while this was ſtanding one Hour and then run off, he boiled his ſecond Wort with half a Pound of freſh Hops, till it broke into ſmall Particles, and immediately after his third Copper, with four Ounces of freſh Hops during one Hour; for this laſt Wort was too ſmall to ſhew its Time by breaking. So that, in this Barrel Copper, he boiled off thirty-one Gallons of neat firſt Wort that was cooled, worked, and then put into two Kilderkins, one of intire Drink, but the ſecond had five Gallons of the ſecond Wort put into it to fill it up; beſides which, he had a Hogſhead of good Small-Beer, made with the ſecond and third Coppers of After-Worts.

Remarks on this Receipt, whereby ſeveral new Improvements in the Art of Brewing are diſcovered. The aforeſaid quick Way of brewing has its good and bad Properties belonging to it, which I ſhall obſerve in particular: *Firſt*, I muſt then object againſt a Copper, which holds only a neat Barrel of Liquor, for brewing four Buſhels of Malt, becauſe I have not room to boil and bring off thirty-ſix Gallons of neat Wort, but muſt be obliged to ſupply the Defect, in a great Meaſure,

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by putting an additional freſh Wort, as the Body of Liquor waſtes, whereby the Ebullition is check'd, which ſhould be carried forward as high as poſſible, that the Wort may break the ſooner, the Virtue of the Hop be got out the better, and the Wort in leſs Danger of boiling over the Sides of the Copper.

Secondly, By putting Salt into foul Water, to cauſe a Scum to riſe, is the Way to have a pure Liquor freed from all Corruption, make it better penetrate the Body of the Malt and Hops, force the Wort to break in a little Time, and bring the ſame under a kind Working, and that very quickly, becauſe it frets and heats the Wort; it likewiſe gives a good Reliſh to the Drink, and obliges it to make its Sediments and fine in a little Time; but then due Care muſt be taken, that all Scum be ſkimmed clean off before it boils, leſt the Ebullition ſo mix it with the Water, that it cannot be cleared from it afterwards. There are others, that think it beſt to put the Salt in juſt before it is ſet a working, or while it works.

Thirdly, Why the hot Water is ſuffered to ſtand no longer than two Hours, before the Cock is turned, is, firſt, to prevent any Sourneſs, or other Damage that may accrue from the Water and Malt's lying too long together, before an Evacuation. *Secondly*, becauſe, if it remains longer, the After-worts will, perhaps, be weaker than you would have them. This is a Conſideration, which is paſs'd over by many of thoſe who are ſo attached to an old Cuſtom, that right, or wrong, the Liquor and Malt muſt lie three or four Hours together; as is very common among Country ſmall Brewers.

Fourthly, The Obſervation of the Worts breaking in the particular Manner I have juſt mentioned it, is a very nice Point, and of ſuch conſiderable Importance, that all Brewers whatſoever ought exactly to obſerve it; for by ſo doing, and if it is worked right in the Ton, the Drink will be fine very quickly, after it has clear'd itſelf of the Yeaſt at the Bung-hole; and thus become

much better, than if it had been boiled two, three, or four Hours; but, if it wants due Curdling or Breaking in the Copper, it ſeldom or never fines kindly in the Barrel. For, when Wort is diſcharged out of the Copper, before it is boiled into a curdling Condition, or if the Ebullition is continued too long afterward, then the farinaceous, or mealy Part of the Wort will not ſo ſoon ſubſide, or become fine, as when boiled till the Liquor curdles, or breaks into proper Particles; for, by this, it ſhews the Wort is then ready to depoſite its groſſer Particles.

Fifthly, By turning the Cock, and ſpending the ſecond and third Worts off, rather before an Hour is elapſed, is likewiſe of great Moment: For, by ſo doing, the hot Bulk of the Body is diminiſhed and cooled in due Time, whereby the Souring of the Grains, or what ſome call *Blinking* or *Charing*, is prevented. In this Caſe, thoſe Grains, neareſt the Cock-hole, are in moſt Danger of being tainted, if theſe Worts are ſuffered to continue a whole Hour, or more, in the Maſh-Tub, before they are diſcharged, at firſt by a ſmall Stream, and then faſter by Degrees; and of this many are ignorantly guilty, and ſpoil the Drink; for it is here the greateſt Heat is diſcharged, which, in Courſe, will ſour that Part firſt; and, if the Grains are once tainted, they will affect all the Worts that are afterwards made by the ſame, and give the Drink a ſickiſh Taſte, which very probably may be incurable.

Sixthly, Some, though the Copper be never ſo big, will keep out a Pailful or two of Wort, to be put in afterward, by Degrees, on Purpoſe to cauſe the Wort to break the ſooner, which is certainly a very good Way; though there are others, who think it of no Importance, provided they have room enough to boil the Wort fiercely.

Seventhly, A Country Gentleman was ſo curious in brewing his *October* Beer, that he would have the Malt-Kernel only juſt broke, that he might have the Wort

Wort run off the finer; and, to improve it further, his Way was to cauſe two Beechen Billets to be burnt almoſt to a Coal, and while they were in full Fire, to put them into the Wort, and boiled them in it all the Time the Ebullition continued, believing, that theſe Fire-brands fined, mellowed, and added a Strength to the Drink, and it anſwered his Purpoſe well. But, in another Caſe, that was recommended to the ſame Gentleman's Trial, a Piece of raw Deal was uſed inſtead of the two Billets, as the beſt Thing to improve the Liquor, but this proved ſo diſagreeable that the Beer could hardly be drank.

Laſtly, ANOTHER who uſed to brew his ſtrong Drink by only one Maſhing, and afterwards by Ladings over of ſcalding Water, obſerved to thruſt down a good Handful of freſh Hops juſt over the Tapwhips, wherein a Braſs Cock was placed. By this, his Intention was to ſecure the Wort from receiving any Damage, till it went into the Copper, for where only one Copper, and only one Maſh-Ton are uſed, the firſt and ſecond Worts are obliged to lie out of the Copper ſome Time, while the Water is heating to put over the Goods.

To brew ſtrong Beer by a late printed Receipt, with Remarks on the ſame.—To a Barrel of Beer, take two Buſhels of Malt, and half a Buſhel of Wheat juſt cracked in the Mill, and ſome of the Flour ſifted out of it; when your Water is ſcalding hot, put it into your Maſhing-Vat, there let it ſtand till you can ſee your Face in it; then put your Malt upon it; then put your Wheat upon that, and do not ſtir it; but let it ſtand two Hours and a half; then let it run into a Tub, that has two Pounds of Hops in it, and a Handful of Roſemary-Flowers; and, when it is all run, put it into your Copper, and boil it two Hours; then ſtrain it off, ſetting it a Cooling very thin, and ſet it a Working very cool; clear it very well, before you put it a Working; put a little Yeaſt to it; when the Yeaſt begins to fall, put it into your Veſſel;

and, when it has done working in the Veſſel, put in a Pint of whole Wheat, and ſix Eggs; then ſtop it up: Let it ſtand a Year, and then bottle it. Then maſh again: Stir the Malt very well in, and let it ſtand two Hours, and let that run, and maſh again, and ſtir it as before; be ſure you cover your Maſhing-Vat very well; mix the firſt and ſecond Running together, and it will make good Houſhold Beer.

Remarks on this Receipt.—It is eaſy to perceive, whether the Scholar or Practitioner had the Compiling of this Receipt; for, had it been one of the latter Sort, he would have known better, than to allow only two Buſhels of Malt, and leſs than half a Buſhel of raw Wheat, to make a Barrel of ſtrong Beer, which contains thirty-two, or thirty-four Gallons, to be tapped at a Year's End, and kept in Bottles afterward, before it be drank; for every one of Judgment knows, that nine or ten Buſhels are the leaſt that can be allowed to a Hogſhead of ſtrong Beer, in Proportion to which, there muſt be ſomewhat above ſix Buſhels and a half to a Barrel: And to make this erroneous Method the more compleat, another groſs Miſtake is added; the ſecond Wort muſt ſtand two Hours on the Grains: A fine, old, wrong Way of brewing indeed! However, I could tell him how to make up the Deficiency of Malt in the Caſk, and give it ſuch a Body, in Time, as to bring it juſtly under the Denomination of a good, ſtrong, pleaſant, cheap Beer, as it was practiſed by a certain Victualler, who, in a great meaſure, got an Eſtate by it; for the Charge of curing a whole But is no more than about half a Crown; and it was by this Piece of Cunning, that the ſame Victualler ſo improved his common brown Twopenny, that, after it had a Year's Maturation in the But, he always ſold it for the beſt ſtout Beer, which he artfully called *Coal-Hole*, at Sixpence a Quart.

To brew Ale or Beer by Mr. Nott's *Receipt, with Remarks on the ſame.*—Put half a Hogſhead of Water into your Copper, cover it with Bran, when it is ſcalding

ing hot, put a third Part into the Maſhing-Tub, and let it ſtand till it is ſo far ſpent, that you may ſee your Face in the Liquor: Then put in two Buſhels of Malt; ſtir the Malt and Liquor well together: In the mean Time, let the reſt of the Water boil in the Copper, then put out the Fire, that the Heat of the Liquor may be allayed; then put the other Part off it into the Maſh-Tub, and ſtir it well again; put in alſo a Shovel or two of hot Coals, to take off any ill Taint of the Malt, and ſo let it ſtand for two Hours. In the mean Time, heat half a Hogſhead more of Liquor, and, when you have drawn off your firſt Wort, put Part of it on the Grains, and ſtir in a Buſhel and a half more of freſh Malt; then put in the reſt of the Liquor, and ſtir it as before; then put your firſt Wort into the Copper again, making it ſcalding hot, and put Part of it into a ſecond Maſhing-Tub; and, when the Stream is gone, ſtir in it a Buſhel and a half more of freſh Malt; then put in the reſt of the Wort, and ſtir it well, and let it ſtand two Hours; then heat another half Hogſhead of Water, and, when what was put into the firſt Maſhing Tub has ſtood two Hours, draw it off, and alſo that Wort in the ſecond Maſhing-Tub, and take the Grains out of the ſecond Maſhing-Tub, and put them into the firſt; then put the Liquor in the Copper into it, and let it ſtand an Hour and a half. In the mean Time, heat another half Hogſhead of Water, and put it on the Grains, and let it ſtand as before. Boil the firſt Wort with a Pound of Hops for two Hours, or till it looks curdly, for Beer; and the ſecond Wort with ſix Ounces of Hops, for Ale, an Hour and a half; then boil the Hops of both Worts in your other Liquor, for Table-Beer, an Hour and a half.

This Receipt, it is plain, has had a great deal of Pains taken in the Invention of it, and a great deal of it is very good; but, inſtead of having two Maſh-Tubs and one Copper, I am of Opinion, that two Coppers and one Maſh-Tub would be much better; becauſe,

becauſe, while a great deal of Time is ſpent in heating the Worts and Waters, the Grains will be in Danger of ſouring, and then our Charge and Labour will be loſt in a great Degree. He is alſo very wrong in adviſing to boil the firſt Wort two Hours, with the Hops in it all that Time, but right till it looks curdled. Alſo, the ſecond Wort to boil an Hour and a half is rather too much; but the laſt no Matter how long, ſo that freſh Hops are boiled in but thirty Minutes. As to the Cinder Account, it is an old Faſhion now much in Diſuſe, becauſe it is inconvenient to let them lie among the Goods, as hindering their Maſhing, or ſtirring, and ſpoiling the Grains; and the rather, becauſe the good Service they may do, can be ſupplied by boiling parched Wheat, or quenching Fire-brands, or burning Cinders in the Worts; but there is no Occaſion for any of this, if the Malt is good.

Sir Jonas Moor's *Way of brewing Ale, with Remarks.*—ALLOW five Buſhels and a half of Malt to half a Hogſhead of Ale; put into your Maſh-Tub forty-five Gallons of Liquor, becauſe one third Part of the Liquor will be ſoaked up by the Malt, and a ſixth Part will waſte by Boiling. For the ſecond Wort, put but little more Liquor, than you intend to make Drink; and, becauſe you have a large Quantity of Malt, you may make a third Wort, putting in Liquor, according to the Quantity you would have.

THIS old publick printed Receipt is well calculated to make a humming Caſk of ſtrong Ale; but the Liquor or hot Water, in my humble Opinion, ſhould be forty-eight Gallons, to make an entire half Hogſhead of Ale, becauſe, allowing ſixteen Gallons, or a third Part of that to be drank up by the Malt, never to be returned, there will be thirty-two Gallons of Wort come neat off; and then, giving a further Allowance for five Gallons, or near a ſixth Part to be boiled away,

away, there will be juſt twenty-five Gallons or half a Hogſhead remaining.

A new Way to brew ſtrong Drink.—BREW a ſtrong Wort, and let it run off on a good Quantity of Hops, then cool, thin, and let it run very fine into a Barrel, where ſome Yeaſt is before-hand put in, mixed with a little of the Wort. When worked, put in a ſufficient Infuſion of Hops, and alſo one or more Dumplins made with Rye-Flour, Bean-Flour, and Flour of Malt; let it ſtand to a proper Age.—The Rye and Beans muſt be firſt dried, before they can be well ground into Flour, and then ſifted. Here the Wort has no Boiling or Heating after it is out of the Maſh-Tub, and, where a good Body of Malt is allowed, it may prove excellent Drink, as great Quantities have done that have been brewed no other Way. But this Method, in its full Particulars, I have wrote of in my Second Part, where you have it, as it was firſt invented by a Phyſician, for Health, Pleaſantneſs and Cheapneſs, and it is now practiſed by many. Some boil their Wort but a Quarter of an Hour, others not at all, as believing both Ways right, where a ſufficient Quantity of Hops are allowed. This Method of Brewing, without boiling the Wort, is now ſo commonly practiſed in and about a certain Town in *Bedfordſhire*, that a labouring Man, who goes about to brew for People, conſtantly infuſes his Hops in hot Water, under a Cover, and puts the Liquor, when cold and ſtrain'd off, into the Wort, for *October* Beer. For his Notion is, that it is the Spirit that keeps any Liquor, and the Boiling evaporates it, and loſes its volatile and better Part.

To brew a Family Table-Beer, without boiling the Wort.—AT *Eaton* in *Bedfordſhire*, lived a Perſon who got a conſiderable Eſtate, by buying and ſelling Straw Hats: This Man would never brew any ſtrong Drink, but made uſe of a Family Malt Liquor, which he called ſmall Beer, thus: He boiled a large Kettle of Water and Hops, and put both together over a Buſhel and a half

half of Malt, which he maſh'd, and at an Hour's End drew off the Wort into Coolers; then he put over a ſecond Kettle of boiling Water and freſh Hops, and did the ſame as the firſt, and ſo a third, excepting that, for this laſt, he made Uſe of no Hops, as believing the firſt two Parcels made the Drink bitter enough. Thus he always made half a Hogſhead of Beer, and allowed ſix Ounces of Hops in Summer, and four in Winter, and tapped at a Fortnight or Month's End.

To make Porter, *or give a But of Beer a fine Tang.* THIS, of late, has been improved two ways: Firſt, by mixing two Buſhels of pale Malt with ſix of brown, which will preſerve But Beer in a mellow Condition, and cauſe it to have a pleaſant ſweet Farewel on the Tongue: And Secondly, to further improve and render it more palatable, they boil it two Hours and a half, and work it two Days as cold as poſſible in the Ton; at laſt, they ſtir it, and put a good Handful of common Salt into the Quantity of a But: then, when the Yeaſt has had one Riſing more, they ton it.

BUT I am ſure that that common Brewer is wrong, who boils his Hops above thirty Minutes; for, by how much the longer he boils them, ſo much the more is the Beer made worſe.

CHAP. IV.

To ſave the Waſte of boiling Wort, *as it is practiſed at* Chilham *in* Kent.

THE Landlord of the *Woolpack* Inn here has a Copper, that boils off two Hogſheads of Wort at a Time; and, cloſe over this Copper, he has a ſhallow wooden Back, larger than the Copper, fixed with a ſquare riſing Hole in its Center eighteen Inches wide, which ſerves to let a Man through to ſcour the Copper, and ſometimes to ſet out the Steam, *&c.* and which

ſometimes

ſometimes has a Cover faſtened very tight over it to confine the Steam. In this Back is alſo a round Plug-hole two Inches Diameter, for letting out the Steam, and deſigned, by its Narrowneſs, to prevent the Eſcape of much Vapour; but then, at the ſame Time, the large ſquare Hole is all the while ſafely ſecured. By this a conſiderable Deal of Liquor is ſaved; alſo, while the Wort is boiling, he may fill the Back with Water, which gets a good Heat againſt the Wort is run off, but then he faſtens the Plug-hole and opens the ſquare one. It may likewiſe ſerve to hold the next Wort that is to ſucceed the boiling one, and thereby ſave much Fuel, Time, and Waſte. To this Copper a Copper Arm is joined, with a large Braſs-Cock at the End of the ſame, which gives him an Opportunity of ſeeing what Condition his Wort is in at Pleaſure; and it is by this Means, that he boils his Hops always looſe in the Copper, becauſe he eaſily lets them out by the Cock-hole with the Wort, and receives them at the End of a long Spout in a Sieve; and, if a Stoppage happens, he pokes a little at the Hole, and they come away. This he reckons a cheaper and better Invention than to have a Copper Back built higher with a Curb and Door, as is done in the great *London* Brewhouſe, becauſe in this he can boil his Wort well, and yet confine the Steam to a narrow Paſſage; for it is his Opinion, that the Vapour cannot be intirely confined in either; at leaſt, that it would not defray the Charge of Works to perform the ſame, as being of a ſpirituous and very potent Nature: And even the Steam of only boiling Water is ſo ſtrong, that it will drive out vaſt Quantities of Water in a little Time through long and great Aſcents, as was experienced in that late Water-work at *York-Buildings*, whoſe Fire-Engine was firſt invented by that famous Artiſt Captain *Savory*, whom I had the Pleaſure to know. Wort may be boiled into Air, for Liquor will rarify into eight hundred Times its Particles. Wort loſes ſome Spirit, as may be perceived by the Steam's ſo ſtrongly affecting the Noſe; and even

Water

Water has a Spirit, as may be diſcovered by that directly from the Spring, which drinks briſk, when that, which has been ſome Time out of it, is vapid. When Liquor is diſtilled, the Steam is very much confined, though not totally, becauſe there is a Vent, in a ſmall Degree, through the Worm; but the cloſeſt Invention for confining the Steam, that I ever ſaw, is that of *Chatham* Dock, firſt put in Practice there in 1737, being a long Trough, or hollow Square, made with three Inch thick oaken Planks, thirty-two Feet long, five Feet high and four broad, bound about with three Inch broad Iron Bars, at four Feet Diſtance each. In this oaken Planks are laid for the confined Steam of hot Water (ſupplied by three Barrel Coppers) to impregnate and reduce them to a Limberneſs, which in ſix Hours Time the Steam will do, and ſo rarify and weaken the Sap of the Plank, that, while it is hot, it is carried and made pliable to the crooked Side of a Ship, without that Waſte which hot Sand uſed to cauſe; for the Sand ſtuck ſo faſt to the Timber, and extracted ſo much of its Sap, as to cauſe it to rot in leſs than ten Years Time, by the Dampneſs that accompanied it, beſides damaging the Tools that were employed in working them; whereas the Steam preſerves the Sap, gives free room to the Tool, and thereby ſtrengthens the Plank, and makes it more durable.

To prevent Wort *Foxing in the Coolers, or in the Vat or Ton.*—To do this, in the Backs or Coolers of the great Brewer, is inconſiſtent with his Conveniency, becauſe, if he ſtirs the Wort here, the Sediments will riſe and get into a foul Body; for it is here he has the beſt Opportunity to fine his Worts: But the ſmaller Brewer may more likely have the greater room and more Coolers to draw off and ſhift, or ſtir them about in due Time, whereby he may prevent any creamy Head gathering on the Top of the Wort, which too thick, or too long lying undiſturbed in one Cooler, eſpecially in hot Weather, very often cauſes. Alſo in the working Vat or Ton, when the Wort is let into it too warm,

warm, or when it lies here in a deep thick Body too long before the Yeaſt is put into it, or if it is not ſtirred or toſſed up now and then by a Hand-Bowl or Scoop, to cool and break its Body, it is very apt to get this creamy Head, and Fox or Taint. But this ſometimes likewiſe happens after the Yeaſt is ſtirred into the Wort, that is, before the Wort and Yeaſt are rightly incorporated, the creamy Head will gather and the Damage enſue. Now, when there is Reaſon to apprehend any ſuch Danger, you muſt either draw your Wort finely off into freſh Coolers, or ſtir or toſs it about them, or the Ton or Vat it is in, to give the Liquor a cooling Motion; for, by ſuch an Agitation, the Heat of it is leſſened, and Coheſions prevented, whereby any ſuch ſpewy, creamy Head, or Ferment, is intirely kept off. The Want of this Knowledge, in all former Authors on this Subject, and in Thouſands of Brewers, have occaſioned the Loſs of vaſt Quantities of Malt Liquors; which might have been eaſily prevented, had they known the Benefit of thus ſhifting or ſtirring the Wort in due Time.

Of Whipping, Beating, or Stirring Yeaſt into But Beer and Ale.—It was in that Part of *Kent* which borders on *Suſſex*, where, in a hot Day, I and my Company were glad to ſee a Public-Houſe, after riding ſome Miles without any Refreſhment; here we called for ſome Drink, and being dry, I drank heartily, and it preſently affected my Head, by which, and the yeaſty Tang it had, I ſoon diſcovered the common Bite, of its having paſſed through the whipping Diſcipline; on this I aſked the Landlord, whether he brewed it? He anſwered, he did not, but it was a fine But Beer, which he was ſerved with by a common Brewer, who lived in ſuch a Town ſome Miles off. Wondering that the Northern Art had got ſo far into the South, and being, about three Years after, in the ſame Town, I remembered this yeaſty But Beer, which made me curious enough to enquire after its Brewer;

Brewer; and I was told, he had employed a *Yorkſhire* Man for his Servant, who taught him this Way, which he had followed ever ſince, to his great Profit. Now, though Yeaſt naturally tends to the ſouring of all Drink it is beat into, yet by a tolerable Body of Malt, a large Parcel of Hops, and perhaps ſome alcalous Feed beſides, ſuch But Beer will keep a conſiderable Time, in a mild mellow Condition, as this was in when I drank it. A certain *Yorkſhire* Woman, who kept an Inn in *Suffolk*, ſaid, ſhe thought none could out-brew her, or, to be more plain, no Way of Brewing was ſo cheap and profitable as hers, which was chiefly by often beating Yeaſt into her working Ale, even for a Week together in Winter, but ſomewhat leſs in warmer Weather; it was this Woman, that ſaid, It was a Pity but all Brewing Books were burnt, but preſently replied, and pleaſed herſelf with ſaying, It is no Matter, for few will mind what they read, and fewer will put it in Practice; fearing that the many valuable Secrets, contained in them, would, in Time, prejudice the Sale of hers, and ſuch like unwholeſome Legerdemain intoxicating Ales and Beers. Another Town Brewer was ſo careful to have his Ale thoroughly tinctured with a ſulphureous Quality of the Yeaſt, that he would work the Strainings of the firſt Wort (as it was ſaved after the Sediments were freed from it) ſo much, that he would every now and then throw ſome freſh Supply of it into the reſt, as it was working or fermenting, and beat it the oftener in, as it was the nearer going into the Barrel; by which he cauſed ſix Buſhels of Malt to make as ſtrong Drink as eight Buſhels would, if the Yeaſt was not beat into it.

Harveſt-men intoxicated with yeaſty Ale.—I HAVE only one Caſe or Item more to add under this Head, which is, that a Farmer, with one of his Men, being engaged in brewing his Harveſt-Ale, the Fellow ſeemed to be diſpleaſed with the Quantity of Water employed, and told the other Servants, that they might expect

expect ſmall inſtead of ſtrong Drink; upon which the Maſter (who was my Acquaintance, and ſenſible of the yeaſty Impoſition) took the Opportunity of ſtirring in the yeaſty Head three ſeveral Times; about a Week after it was put into the Barrel, he ſends for one of the greateſt Goſſips in the Neighbourhood, and treated her with only one Pint of this Ale, which he knew would affect her Head; and accordingly the ſulphureous Spirit, contained in the Yeaſt, had ſuch an Effect on it, as to make our Noveliſt ſoon publiſh its Power, and declare ſhe was never ſo intoxicated with a Pint of Drink before: Likewiſe the labouring Men all declared, they never had ſuch ſtrong, good Harveſt-Ale in their Lives. But, how unwholeſome ſuch yeaſty, ſtrong Ale is to the Body of Man, I have clearly ſhewn by the Example of its poiſonous Nature, which brought a young Perſon into a Lunatic Condition for ſeveral Months, as I have related it in my ſecond Part of the *London and Country Brewer*.

The Nature and Miſchief of ſtrong Liquors. HAVING under the laſt Head expoſed one of the moſt common, though abominable Methods of rendering our Malt-Liquors extremely unwholeſome, I ſhall here, by Way of further Contraſt, or exciting the greater Regard for ſuch Malt Liquor as is truly brewed and managed, and is neither too ſtrong nor too ſmall, whereby it may juſtly be called, as a certain Author obſerves, a true *Vinum Britannicum*, or *Britiſh Wine*, and which moderately uſed is undoubtedly the moſt homogeneous and proper Cordial for the *Engliſhman*'s Conſtitution; I ſay, though it may ſeem a Digreſſion, yet as it will likewiſe expoſe the too common and fatal, though often unſuſpected, Effects of diſtilled ſpirituous Liquors, and I hope, be a Means to further the Legiſlature's good Intention of bringing them more and more into Diſuſe. I ſhall here alſo briefly obſerve, that there is a latent or hidden Acid in ardent or burning Spirits, beſides a fiery Part, which is the merry-making or intoxicating Quality in all ſtrong Liquors, and which,

as Dr. *Godfrey* writes, is a bitter Enemy to the Spring of Life.

THIS Acid is evident from the following Experiment, *viz.* Put one Ounce of Spirit of Wine into a Quart of pure Water, ſhake it, ſet it by for a few Days, and you have a ſour Liquor or Vinegar. *Secondly*, let a Piece of Lead be laid in Spirit of Wine, which after ſome Time will have its Surface eaten or corroded, and a Ceruſs or white Lead will be formed; which Power of corroding comes from the acid Salt, one of the component Parts of the ſaid Spirit. Strong Liquors of all Kinds hinder Digeſtion, they being juſt of a reverſe Nature to what is neceſſary to it: They introduce a Lentor or Coagulum into the Blood, and impede or ſpoil its due Circulation: They ſubject the Drinkers to Cholics, and beget Polypuſſes, with many more Miſchiefs that might be enumerated, that are brought on by the Uſe of ſtrong Liquors. In a Gallon of Brandy there are about two Quarts and a Pint of Spirit. In five Quarts of a made Dram, there are but two Quarts of Spirit: And *Geneva*, ſo much eſteemed by the Vulgar, is indeed a vulgar Compound, being the Produce of thirty Gallons of Water, and ten Gallons of Spirit, ſuch as we burn in Lamps, with a Quart of Oil of Turpentine diſtilled together.

The Pleaſure and Profit of good Beer and Ale. As a clear, wholeſome, pleaſant Malt Drink is juſtly eſteemed the beſt univerſal Liquor this Iſland affords, and, where it may be the beſt brewed of any Place in the whole World, it is of the utmoſt Importance to make it anſwer this great End; becauſe, by this, Health is preſerved, both Maſter and Servant kept at Home, or near it, Buſineſs more diligently and expeditiouſly carried on, the great Expence of high priced Wines and unwholeſome Spirits leſſened, the Publican enriched, and the Exciſe Revenue increaſed: On the Contrary, where there is no other Drink to be had than thick, groutiſh, ſickiſh, fulſome Ale, or ſharp, harſh, ſtale or ill-taſted Beer, then Home and its Neighbourhood become

become irkſome and forſaken by both Maſter and Servant, who think their Time well ſpent in roving, perhaps a Mile or two, in Search of what is right good; and then, if it pleaſes them, they ſo indulge their rare Opportunity, as to miſs no Time nor think of any Loſs, and thus bring themſelves under a thouſand Calamities; which a Veſſel of true Nappy at Home, or at the next Public-Houſe, would in a great Meaſure prevent, by their having an Opportunity to enjoy it after an eaſier and cheaper Manner. To this Purpoſe I know a Gentleman, who allows a Quarter of Malt, brewed in a pure Manner, to make only four Barrels of Beer for his Servants common Drinking, as believing it a good Piece of Huſbandry ſo to do. A certain Nobleman, who keeps a great Quantity of Graſs Ground, *&c.* in his Hands, acted ſo generouſly as to brew above thirty Hogſheads of potent Drink for his Hay-makers and Harveſt People, which ſo ſpirited them, that every one thought himſelf happy if he could work for ſuch a Maſter, and vie who ſhould do him the beſt Service. An Example worthy of Imitation! And it even raiſed my Surprize in this uncharitable Age, to our Shame be it mentioned, to ſee an excellent hoſpitable Lady, at her charming Seat, about thirty Miles from *London*, in *Surry*, allow her Servants to treat a meer Stranger with a two Quart Tankard of fine Home brewed Ale at a Time, and a plentiful Dinner of Half a dozen Diſhes of Meat; an Inſtance I never met with beſides, or any Thing like it, in all my Travels, tho' it is common here for the very *Scotch* Pedlar to meet with a regaling Refreſhment of good Nappy, if he does but quit his Pack, and make known his Profeſſion. Nor have I heard of any that exceeds this generous, noble Lady, except that admirable *Staffordſhire* Lord, who makes the County about him happy, by keeping open Houſe every Day throughout the Year: May their Tables always be furniſhed with Plenty of the beſt Viands, and their Cellars ſtill continue to be ſtored with the beſt Liquor in the World, *viz.* true brewed

Britiſh Ale, and Beer, made from a right Barly Corn, duly cured and ſweetly dried into Malt. A Victualler having ſuch bad Beer ſent him, that he almoſt loſt all his Trade, the Maſter Brewer, unknown, called for a Pint of it, and ſaid it was poor Drink: Hye, ſays the Victualler, I believe I ſhall never ſtand it, if I have not better. The next Time he went to the Brew-houſe to ſpeak for more, the Brewer took Care to order that he ſhould have the beſt; ſome Time after the ſame Brewer, ſtill unknown, calls again, and, on Taſting his Drink, ſaid it was good; the Victuallen replied, It is ſo, and now I ſhall be able to ſtand it and pay my Brewer: On this, Maſter *Cog* declares himſelf, and ſaid, I am your Brewer, and you ſhall always have good Drink for the Time to come. I happened to be at a Public-Houſe, in a certain City, where a Countryman came to enquire for his Brother, who was there drinking; on this one of the Company drank to him out of a ſilver Tankard of Intire, but the Countryman refuſed, and his Brother made this Apology for him ſaying, he can never drink any of our Town Malt-Liquor: To this City my Buſineſs ſometimes calls me, and though famous for its Malt-Liquors, yet I do hereby ſolemnly declare, if I was to give a Guinea, for a Quart of ſuch Malt Drink, that I like, I know not where to buy it. In one Part of the Country, for above a hundred Miles together, I met with, for their beſt Drink, a pale, harſh, ſtale But Beer; in another Part, for near that Length, a brown, ſharp, ſtale But Beer; and in both which I have ſeen ſeveral miſerable Spectacles, ſome with their Fingers ſtanding a ſtrut, others with their Feet in Flannels, others walking with two Sticks, and occaſioned by the Gout, bred by conſtantly drinking theſe crabbed Liquors. In another Part, nothing but an ill taſted Ale, made by Malt, dried with Wood. In another, a ſtrong, gorging, intoxicating Yeaſt-beaten Ale, as fine as Sack in the Glaſs, but of a ſickiſh fiery Nature in the Belly.

CHAP.

CHAP. V.

Drink *made thick and cloudy, by the Ignorance of the* Brewer.

THIS is often done by drawing off the Wort too near, and then putting over a great Quantity of hot Water on the Grains, which, by its Weight, cauſes ſuch a Preſſure, as to force down the Flour of the Malt to the Bottom of the hollow Goods, and thus makes the Wort run foul, and the Drink oftentimes become cloudy in the Barrel.

To make brown Malt run off a pale Wort. PUT a pretty deal of Wheat Flour or Bran upon the Maſh.

To cauſe a high Colour in Drink made from pale Malt. PUT a Pottle of dried ground Horſe-Beans, Hulls and all, into a Quarter of ſuch Malt.

The Virtues of Salt of Tartar, as it relates to brewing Malt Drink. THIS is a great Alcali, and opens Bodies prodigiouſly. If you put as much as will lie on half a Crown into a Barrel Copper of Water, it will not only extract the Virtue of the Malt very expeditiouſly and effectually, but alſo add a brown Colour to the Liquor; ſo that inſtead of rubbing Hops with common Salt to make them emit their Virtue to the Beer, you may do it with a little of this Salt of Tartar which is much better: This Salt is made from the Tartar which white Wines afford, but what is commonly vended for it is made from the Lee drawn from what we call *Pearl* or *Wood Aſhes*; and though it be of an urinal Taſte, yet a little, which goes a great Way, is ſo far from being prejudicial, that it is a great Antiſcorbutic; it makes Malt go the further, fines the Liquor, by ſeparating the foul Particles of it, and throwing them down ſooner than in the natural Way, ſoftens the Water, and makes it the fitter for extracting the Powers of the Malt and Hops; a Quarter of an Ounce is enough to four Pounds of Hops to be thus uſed.

Put it into the hot Water that is to be poured on the Hops to make an Infuſion of them. With this great Drawer you may extract a good Wort from whole Malt, but then the Malt ſhould be made true, *i. e.* it muſt be leiſurely dried on a Kiln, ſo that it be mellow enough to mark while it is in a whole Body, if preſſed againſt a Board; for, if it is hard and ſteely, you cannot extract the Quinteſſence of its Flour; with this Ingredient, and the help of repeated hot Waters, you may get the Goodneſs out of ſuch whole, ſoft, mellow Malt, and thereby draw off a fine tranſparent Wort, and enjoy a pure vinous Beer or Ale; but there is another Way to do this, as follows:

To make a fine tranſparent Drink from Malt, without grinding it.—THIS is done by only bruiſing a mellow Malt between two wooden Rollers, one whereof is to be turned about by a Handle; and by this Way you may extract its Quinteſſence exquiſitely fine, without the Danger of having too groſs a Mixture of the Malt's Flour.

How Drinks become ropy and foxed.—SOME ignorantly boil raw whole Wheat in their Wort, to make it get a clear Body in the Barrel; but inſtead thereof, when this is put into the Copper in too great a Quantity, or boiled too long, it will cauſe the Drink to remain in a thick Condition, and very likely rope and fox; and ſo will Ivory or Hartſhorn Shavings, if they are thus imprudently managed. On the contrary, when whole Wheat is firſt parched, and a Couple of Handfuls of it are boiled thirty or forty Minutes in a Barrel or Hogſhead Copper of Wort, it may improve the Drink. Thus the Shavings may do the like Service, if uſed in a little Quantity; for, in many Things, what is deſigned, as an Antidote, becomes a Poiſon on wrong Application, as in the Caſe of Iſinglaſs, which by moſt is allowed to flatten Drink as well as fine it: But a certain Wine-Cooper declared it to be a wrong Notion, alledging that, if this was true, they durſt not make ſo free with it in their Wines, which receive

no

no Hurt by it; and that it is only the too great Quantity of it that does the Miſchief.

To keep Backs and Tons ſweet. To do this, in the beſt Manner, is to follow the Example of the great *London* common Brewer, who now and then, chiefly in hot Weather, throws ſome Stone Lime into a little Water left on Purpoſe in the Bottom of the Back or Ton, and as ſoon as it has ſlack'd and lain a little while, they pour more Water in, and ſcrub it over the Bottom and Sides; then they waſh all off with clear Water. It is likewiſe done with Bay Salt, which they ſtrew all over the Bottom and Sides of the Back or Ton, that had Water juſt taken out of it; when diſſolved and lain a ſmall Time, they ſcrub well about and diſcharge it.

The different Nature of pale and brown Hops. THE pale unripe Hop is fitteſt for pale Drink, and will keep ſome Time, but they are apt to fail at once, and then the Drink ſtales or ſours. The brown full ripe Hop is beſt to depend on, and, in this Caſe, ſome think one Pound of them better than two of the pale Sort. But there is a true natural pale Vine and pale Hop that grows about *Farnham* in *Surry*, and are as excellent for pale Drinks, as the right brown *Kentiſh* Hop, which grows on the purple Vine, is for the brown Sorts.

To prevent Wort boiling over in an open Copper.— BOILING Wort faſt loſes leſs than boiling it ſoftly, and ſtirring the Wort round on the Outſides with a Stick. while it is boiling; the middle Part may be boiled ſix or more Inches high, and yet none will run over the Outſides.

To prove the Goodneſs of Malt by the Wort. WHEN a Perſon uſes more than one Sort of Malt, he may prove the Goodneſs of it by the Wort, as a certain common Brewer of my Acquaintance does; his Method is to weigh a Quart of the Wort of each Brewing, and that which is heavieſt, is the beſt.

Of the ſweet Flag, Grains of Paradiſe, &c. *how they are uſed in Brewing.* THE former of theſe is called by

Apothecaries *Calamus Aromaticus*, which by ſlicing it thin, and boiling it a little Time in Wort with the Hops, will ſave more than one Pound of Hops in ſix; therefore ſome in a dear Hop Seaſon will uſe it as a *Succedaneum* to this Vegetable; beſides which, it will give a fine Flavour to the Drink, if uſed in a due Proportion, and is very wholeſome. At a great Market Town where I lodged, and ſo in many others of late, it is become too common a Practice to draw their worſt Drink on Market Days, and the beſt at other Times; for here the Publican takes an Advantage of Neceſſity, becauſe as this is the Seat of Buſineſs on theſe Days, if there is any bad Beer or Ale, it muſt now go off to thoſe who are obliged to ſpend their Market Shilling or Sixpence, for ſelling five or more Buſhels of Grain, according to the Cuſtom of the Place, which is now got ſo common that the Buyer ſtops it, as if due by Law; and thus the Farmer is forced either to drink their horrid Hodge-Podge, or elſe to leave his Money behind him, which I and many more have done, as believing it to be the leaſt Evil. At one of theſe Markets, about eighty Miles from *London*, I perceiv'd they had ſo doctor'd their common Two-penny Drink, as to make it go down ſmooth; but, when I found it left a hot Tang behind it, it gave me juſt Reaſon to believe they had uſed Grains of Paradiſe, or long Pepper, both which will ſave Malt: by Reaſon theſe, like Ginger, will add a conſiderable Spirit to the Malt Liquor, eſpecially if the ſweet Flag is mixed with it. Alſo in *Wales*, ſome of the poor People uſe a little black Seed, that is a Weed, and commonly grows among our Grain: This they uſe in Brewing, and, like Grains of Paradiſe, will ſtrengthen the Drink, and make the Malt and Hops go the further; but, if much of this is ground among Wheat, it will cauſe the Bread to be inflammatory.

Of Sediments, their miſchievous Nature and Remedy.— Sediments, in Time, cauſe all Beers, Ales, and Wines to grow rough and acid; therefore Racks are abſolutely

lutely neceſſary, elſe what Occaſion is there for ſo many Wine-coopers, whoſe Art is chiefly to do this, and apply, on Occaſion, a new and richer Sediment, than was in the Caſk before, to maintain their original Sweetneſs, or cure any Sickneſs the Liquor may have acquired from ſuch its natural ſeparated Impurities, which conſiſt of Salt, Sulphur, and much Earth. How wrong then muſt they be, who brew large Veſſels of ſtrong brown Beer, for keeping them to a great Age out of a Bravo, and now and then add to the ſame new Drinks, with their Sediments, and call it *Old-boy*, *Stout*, or *Nog*, and when mixed, *Coke upon Littleton*, &c. By which, the Quantity of pernicious *Fæces* are increaſed, and the Drinks loaded with more of the ſaline, or acid Quality, which conſequently do the greater Miſchief to its Tiplers. An Innkeeper of *Wincheſter*, who juſtly had the Reputation of having the beſt Malt Drink in that City, was ſo careful to avoid every Thing of this Nature, that, even after his Ale had gone through a cold leiſurely Working in the Vat or Ton, he drew it off as fine as poſſible by a Cock out of a Ton, whoſe Bottom was about eighteen Inches higher than the Ground, and left the Head of the Yeaſt with its Bottom all behind: ſo that by this Method he never failed of having a clear, pure, wholeſome, ſilky Ale, which pleaſed all his Cuſtomers: But for his keeping ſtrong Beer he took another Method. Some others are ſo curious in avoiding the Damage of Sediments, that they rack off even their Bottle-keeping Beer into freſh ones every Year, with a Lump of Sugar in each Bottle. By this Management all *Fæces* will be taken away, which otherwiſe cauſe Tartneſs. How wrong alſo muſt they be, who brew no other than intire Guiles of brown But Beer for furniſhing whole Cities, Towns, and I may ſay almoſt a whole County with the ſame? This, by woeful Experience I know to be one of the greateſt Inconveniencies on the Road; for, in the moſt ſultry Day and duſty Road, there is no other Drink to be had than ſuch hard, ſtale, ſtrong fiery Beer, which, inſtead

ſtead of quenching a Man's Drought, adds Fuel to the Fire, and makes him drier and more miſerable, ſo that he has no Remedy but Wine and Water at their Public-Houſes; for ſmall Beer, in many of them is not to be had for Money, and if it is, at ſome of the great Inns, they will reckon Four-pence a Quart for it, as I have paid; and the two firſt mentioned Liquors are not to be made uſe of, the one on Account of its Dearneſs, and the other becauſe it is too cold and weak. In a certain Capital Town, about forty-five Miles from *London*, I would fain have got ſome mild Ale, but I was told, there was no ſuch Liquor ſold in all the Place; becauſe, as to pale Ale, they looked on it as a ſickiſh Drink, and the brown Ale no one would buy, as being an inſipid Liquor, and what they were not uſed to; ſo that here was none, but a harſh brown But Beer, almoſt half Vinegar, to be had. Near this Place a Gentleman lived, who was ſo averſe to their common hard But brown Beer, that he never would drink any of it, without ſcraping a little Chalk into it. And a Gentlewoman, who formerly lived in the Weſt Country, but now reſided here, brewed a light, ſoft amber Liquor, of which ſhe was obliged to carry a Bottle with her, to drink when ſhe dined abroad, becauſe where ſhe went they had none but this ſtale Sort of ſtrong Beer. Here the common Brewer brews a Guile at a Time, containing eight Buts, at three Pound twelve Shillings each, which, when ſtarted in, he gives the Victualler Orders to put two Quarts of whole raw Wheat into each But, and bung it up, which is to remain ſo to the laſt; and this lying ſometimes a Year, or longer, on its Sediments before it is tapped, and being made from a ſulphureous, wood-dried, ſmoaky Malt, ſtrikes the Palate moſt ſeverely with its acid Quality, racks the Stomach, and breeds the Cholic, Gout, Gravel, Stone, Scurvy, and many other Diſeaſes. A fine pernicious *Noſtrum* indeed to reign in a Country, the moſt famous for Malt Liquors! for the Experience of ſeveral Ages paſt confirms to us the dead-

ly Effects of ſuch ſtale, brown, ſtrong Beers, by its bringing many brave, luſty, healthy young Men into Conſumptions and their Graves; and ſo it muſt be till the Eyes of People are more opened, which in the Town I laſt mentioned is the Caſe of many; for here, of late, the better Sort have fell into making a ſmall Raiſin Wine, which delivers them with Pleaſure, Safety, and Profit, from drinking chargeable, unpleaſant, ſtale, and crabbed Beers at the public Houſes; ſo that ſuch ſtrong Beer Brewers and Victuallers muſt go on in wrong Politics, if they do not brew and ſell a clear, pleaſant, ſilky Beer, and an Ale made intirely from all freſh Malt and Hops in a true Method; which, that they may the better do, and preſerve the ſame in a healthy, fine, pure Order a long Time, I have wrote theſe four Treatiſes, and at laſt been prevailed on, contrary to my former Intentions, to publiſh the following Receipts of thoſe moſt excellent Balls, mentioned in my *Second Part*, whoſe tranſcendent Qualities, for fining, reliſhing, and preſerving Malt Drinks, *&c.* in a true, healthful, clear, pleaſant State and Condition a long Time, exceeds all other Inventions that were ever yet publiſhed; whereby the Charge of dear bad Wines, yeaſty unwholeſome Ales, ſharp and unpleaſant Beers, or other thick diſeaſed Malt Liquors, may be avoided, the Revenue of Exciſe increaſed, and every one enjoy himſelf in drinking a ſound, fine Ale, or Beer, in a moſt agreeable Manner, both at home and in the public Houſes abroad.

CHAP.

CHAP. VI.

The genuine Receipt of the aforeſaid excellent Balls, for fining, feeding, preſerving, reliſhing, and colouring Malt Drinks, Wines, *and* Cyders.

Brown Balls.

A Labaſter, or Marble calcined into a Powder, two Pounds. Oyſter-ſhells a little calcined and freed from their brown, or dirt-coloured Outſide, one Pound. Pure fat Chalk, well dried, one Pound. Horſe-bean Flour, firſt freed from the Hulls, one Pound. Red Saunders, four Ounces. Grains of Paradiſe, half an Ounce. Florentine Orice-root, half an Ounce. Coriander-ſeed, a Quarter of an Ounce. Cloves, in Number, ſix. Hops, half an Ounce. The beſt Staple inciſed Iſinglaſs, two Ounces. The firſt Runnings of the Moloſſes, or Treacle, two Pounds.

Pale Balls.

Are made in the ſame Manner, and with the like Quantity of every Thing, except a Pound or two of fine Sugar made into a Syrup, inſtead of the Moloſſes, and omitting the Saunders.

N. B. The Powders are to be pretty fine, and the Balls dried very gradually without Heat for the firſt three or four Days upon brown Paper laid over a large Sieve Bottom, and turned often. Afterwards they may be put into the Sun, or at a proper Diſtance from the Fire, in order to dry them thoroughly; and the Quantity of the Hops may be augmented, or wholly omitted, at Diſcretion, according as the Liquor requires.

Put as much Water to your Glaſs as will juſt cover it, in order to open its Body, letting it ſtand ſo twelve Hours; then add the following Infuſion to it, and gradually diſſolve the whole over a gentle Fire. Then ſtrain it off hot among ſome of the Powder, adding the reſt by a little at a Time, with ſome of the Treacle or Syrup likewiſe alternately, till you beat the whole into

into a ſtiff Maſs, out of which form Balls, weighing four Ounces each.

The Infuſion. POUR a Pint of boiling Water upon the Coriander-ſeed and Cloves bruiſed, and the Hops well rubbed. Cover them cloſe, and let it ſtand twelve Hours, then ſtrain for the Uſe aforeſaid.

The Number of Balls for each Caſk. POWDER one of the Balls and put it into a Pin or half a Firkin; into a Firkin, two; into a Kilderkin, three; into a Barrel, ſix; and ſo on in Proportion as the Caſk is bigger or leſſer, ſtirring them well in; and, if the Liquor has Age enough, ſo that it will bear Racking, it ſhould be firſt ſerved ſo, and then they will anſwer much better.

To cure a cloudy Beer. THIS has been attempted for many Years paſt, but in vain; till lately a chemical Preparation has been diſcovered, that effectually anſwers the Purpoſe; but, as to the Wholeſomeneſs of the Antidote, the Drinker muſt run the Riſk of, as being very probably unknown to him. An Inn-keeper, who brews his own Drink in the Country, applies this: He boils as much Lump or coarſe Loaf-Sugar in Water, till it is ſtrong enough that an Egg will ſwim in it, and, after the Beer has made its due Sediment in the Caſk, he puts the Syrup in to clear it. Another, after the But of Beer is racked off, puts the following Decoction into it when cold, *viz.* with a little Salt of Tartar, boil Hyſſop and Vervain together in ſtale Beer, ſo as to make it pretty ſtrong of the Herbs, which are both great Finers of Drink, eſpecially when they are in Flower; the Vervain alſo prevents any Tang that the Hyſſop may give the Liquor, for, if there is too much of this Herb, it is very apt to do it. It is reported, that a Gill of the Chemical Oil of Sulphur has been put into a But of Drink to preſerve it clear and ſound; for this is ſaid to attenuate and divide thoſe groſs and viſcid Parts, or flying Lee, wherewith ſome Liquors abound; but, of *cloudy Drink*, I have wrote more largely in my *Third Part*.

A new

A new Way of Bunging Drink. A PUBLICAN at *Godalmin* in *Surry* bungs with a Piece of Bladder, and ſays it is beyond every Thing. This they do by paſting the Piece about an Inch or more round the Bung-hole.

To forward the Working of Malt Liquors. BOIL ſome Water and Treacle, or Water and Sugar together; when cold, add ſome new Yeaſt. This Compoſition will ripen Bottle-Beer, in twenty-four Hours Time, or make Drink work in the Ton or Tub that before was backward.

To cure bad Yeaſt. ADD to it a little Flour, Sugar, Salt, Brandy, and Beer, and it will bring it into a Fermentation ready to work new Beer or Ale Wort with. This Mixture will alſo improve ſtrong Drink Grounds, and make it fit to brew or bake with, inſtead of good Yeaſt.

To turn Ale into ſtale Beer preſently. IN *Shropſhire* a Woman, when ſhe intended to have ſtale Drink, would put a Buſhel of Malt into the Maſh-Tub, and uſe a Pound of Hops the more, and brewed it as ſhe did for common Ale. This ſhe let ſtand in a Hogſhead a Month; at the End of which ſhe opened the Bung, and put in a Handful of pickled Cucumbers; if ſome were too big, ſhe would cut them into two or three Pieces, and ſtop all down again: In a Week or two's Time afterwards ſhe would draw a fine Beer, that always had a pleaſant Taſte and Smell, like old *October* Beer ſtaled through Time, and which gave a general Satisfaction to all her Cuſtomers. A *Seville* Orange cut in four Slices, one or more of them will anſwer the very ſame Purpoſe.

To keep Drink from being prick'd in the Caſk. IT is the Practice of a certain Victualler, who lives in *Hertfordſhire*, to put an Iron Pad over the Bung-Hole of a Caſk of Beer or Ale, to keep the Liquor from growing too ſtale or being prick'd; and which it will do, if upon the Pad you work a Piece of Clay, big enough to cover all, ſo as to keep out the Air. This valuable

Way

Way is alſo moſt ſerviceable to preſerve Malt Drinks in the Caſk, in a ſound Condition, in the Time of Thunder; but particularly in a Vault or Cellar which lies expoſed to the Drift of Coaches, Carts, or Waggons over the ſame: And moſt of all where there is no other Conveniency to ſet Drink, but in a Chamber or other Place above Ground.

HAVING received the following Letter from a Friend, an ingenious Gentleman of the Faculty, ſince I had committed the foregoing Sheets to the Preſs, it could not therefore be inſerted in its proper Place; but, as it is too material to be omitted, I ſhall oblige my Readers with it here, *viz.*

SIR, As you were pleaſed, when I ſaw you laſt, to inform me, that you intended, as ſoon as you conveniently could, to publiſh a Fourth Part or Supplement to your *London* and *Country Brewer*; and as thoſe Treatiſes have given me no ſmall Satisfaction, eſpecially in expoſing that horrid Practice of indefatigable beating in of, and loading our Malt Drinks with the Yeaſt; which, as you rightly obſerved, is become, through Ignorance and Avarice, univerſally practiſed throughout *England*, eſpecially in the Management of pale and Amber Ales, ſo as to render them extremely unwholeſome: I therefore, being very deſirous of aſſiſting, as much as in me lies, in the detecting and expoſing any ſuch pernicious Ways, which have, and do daily ſo manifeſtly ruin the Health of Multitudes; and judging it a Point of Duty, for the general Good of my Fellow-Creatures ſo to do, I know not how I can better effect it, than by deſiring the Favour of you, if you have Room and it is not too late, to inſert the following in your new Treatiſe aforeſaid.

THE Thing is this: At a certain great Inn in *C—d*, a Market Town in this County, they brew and ſell great Quantities of a very heady Malt Liquor, which, for that very Reaſon, carries the Bell, by having the Name of the beſt Drink far and near, for the Price; this made me ſomewhat curious to enquire, and, as far

as I could, inſpect into this Woman's Method of Brewing and Management, but found it was all kept a profound Secret; till, at laſt, I prevailed upon a certain Perſon to divulge it, whoſe Wife is related to the Miſtreſs of the Houſe, and has frequently aſſiſted her in Brewing: He told me that the only Thing, which makes her Ale ſo extraordinary fine, ſtrong, and heady, is becauſe that, when the Wort is put into the Copper with the Hops, ſhe never fails to add the Sediments, provided they be not ſour or pricked, of all her Caſks, emptied ſince the laſt Brewing; this rare cleanly Mixture ſhe boils for a conſiderable Time, in order, as ſhe ſays, to get out all the goodneſs of the Grounds; afterwards, when fit, ſhe very modiſhly loads it well with the Yeaſt, by induſtriouſly thwacking it into the Drink for ſeveral Days together: This Receipt coſt her five Pounds, and thus, ſhe has declared, ſhe ſaves twenty Pounds, or upwards, every Year in Malt, beſides improving, as ſhe calls it, her Drink, ſo as greatly to pleaſe her Cuſtomers, by its extraordinary Fineneſs and Potency: But, this, methinks, is ſuch a filthy, abominable, miſchievous, and out of the Way Improvement in the Brewery, that can be exceeded by nothing, but that naſty, horrid, and deteſtable Piece of Cunning and Knavery, which, as I am credibly informed by a worthy Gentleman, a Fellow of the Royal Society, and who aſſured me he had it himſelf from a Brewer, is commonly practiſed in a certain famous *Metropolis*, of putting Chamberlye, or human Urine, into their pale or Amber Two-penny Malt Drink.

And here, Sir, I apprehend it may not be improper to communicate to you my Thoughts, as briefly as I can, on the Nature of Yeaſt, and how it affects the Malt Liquor it is whipped into, ſo as to render it of ſuch deadly Conſequence to the Drinkers; and this I thought of the greateſt Moment, becauſe there are many Perſons, who, although of tolerable good Judgment in moſt other Matters, yet, when I have talked

to them on this Subject, have ſeemed to be wholly in the dark, and could hardly be perſuaded of its Reality.

I MUST confeſs, Sir, that as you have already been pretty copious on treating on this Matter, one would think there could not be much Occaſion for enlarging on it; but as this horrid Practice does, notwithſtanding, ſo notoriouſly prevail among us, I am induced to believe, that the following, if it were publiſhed, might have ſome further Influence to deter and undeceive thoſe whom it may concern, unleſs they be wholly hardened and beſotted in Wickedneſs and Ignorance.

I SHALL not here enter upon a needleſs Diſquiſition of the Production of this floury Part of the Malt Liquor, nor do I propoſe to entertain you with a nice philoſophical Analyſis of all its component Parts, but ſhall only obſerve, that I take it to conſiſt of a great Plenty of a very ſubtile and penetrating, eſſential, acid Salt, or Sulphur, cloſely enveloped, or wrapped up in a very tenacious, ſlimy, or mucilaginous, alcaline Body, which being of ſuch contrary Principles, and influenced by the Air, is the Cauſe of its common inteſtine Motion, or Effervescence: Now, when theſe Particles become diſtended and diffuſed throughout the new Malt Liquor it is to put into, there immediately enſues an occult Commotion upon firſt mixing it (tho' apparent enough ſoon after) from a particular Contact their ſimilar Parts undergo, which gradually increaſeing, does thereby ſo heat and rarify the whole Body of the Liquor, as to cauſe it both to emerge and ſubſide its groſſer Contents: And this it will ſufficiently do, when the Predominancy of the Acid is ſomewhat reſtrained, checked, or intangled by its viſcous alcaline Part; then all lies quiet, and the Fermentation, Hiſſing, or Commotion, in a great Meaſure, ceaſes; and this is likewiſe eaſily known upon Sight, for then the frothy, curling Head of the Drink begins to flatten and fall, which is a plain and natural Indication of its being then fit to turn or put up into the Veſſel, by firſt ſkim-

ming off the floating Yeaſt, and then letting it run (by a Cock conveniently fixed above the Sediment) as clear as may be, into the Caſk.

Now, inſtead of this true, natural, and light Way of working or fermenting our Malt Liquors, it is become too cuſtomary, among many, not only, in the firſt Place, to put into them ſix or eight Times as much more Yeaſt as is neceſſary, but likewiſe to carry on the Fermentation in a furious and unnatural Manner, by violent beating, or whipping into the Liquor the Head of Yeaſt, with a Staff, Broom, or ſuch like Inſtrument, as often as it riſes, which is generally once in three or four Hours, continuing the Agitation in large Quantities, for an Hour, or more, at a Time; and this is held on commonly for three, or four Days, or a Week together (according to the Seaſon of the Year) it being, in many Places, the ſole Buſineſs of one Man to attend this Work Day and Night, rather than this their beloved, profitable (no Matter how unwholeſome!) Artifice ſhould be neglected.

And that ſuch Drink, thus loaded and tinctured with the Yeaſt, is very prejudicial to the human Body, is not only evident from daily Experience and Obſervation, but likewiſe from the Reaſon of the Thing; for, by ſuch long Working and violent repeated Concuſſions, the Liquor is ſo heated, and the Particles of the Yeaſt become ſo communicated and rarified, that the ſaline, or ſulphureous acid Part of it is, at length, very much diveſted of its groſſer, viſcous Part, and almoſt wholly abſorbed, or diſſolved in the Drink: Or, in other Words, as the ſaccharine, ſpirituous, or acid Part of the Liquor becomes predominant, which ſuch long and violent Fermentation naturally excites, ſo does it increaſe the Contact, or Attraction, of ſuch like acid, ſtrong Particles from the Yeaſt, till the Drink has thoroughly imbibed, and is well ſaturated with them.

Now, what remains is to enquire into the Nature and Effects of the aforeſaid ſtrong, acid Particles of the Yeaſt, which the Drink, by ſuch violent Means, becomes

ſo

ſo extraordinarily ſaturated and impregnated with; and this will appear from the following Experiment, *viz.* Take ſtrong Beer Yeaſt, mix it well with hot Water, and let them ſtand four or five Days, or more, cloſe covered over, in the mean time, when it is well ſettled, pouring off the Liquor, heating it again, and adding freſh Parcels of Yeaſt to the ſame, and frequently whiſking them briſkly together, till the Water is well tinctured by the Yeaſt, then, when the Liquor is well ſettled, if you pour it off from the Sediment and filter and evaporate it, you will find, at the Bottom of the Veſſel, a hot, pungent, acrid Matter, of a catharetic Nature, inſomuch that, if applied Plaiſter-wiſe to the Skin, it will raiſe a Bliſter.

A FINE Thing indeed to be admitted into ſuch a ſenſible and nervous Part as the Stomach is, by Way of a Cordial, and that in ſuch profuſe Quantities as it uſually is! No Wonder then that ſuch Liquor is ſo very intoxicating, ſince it cannot fail of wounding and damaging the whole nervous Syſtem; for altho' the acrimonious, fiery, and ſtimulating Properties of this yeaſty Matter be not readily diſcoverable upon the Palate, any other Ways than by a little rough, biting Twang, and are likewiſe reſtrained from immediately taking Effect upon the Body, by the ſoft, ſheathing, balſamic, or oleaginous Quality of the Ale; yet it is certain that, by their being thus intimately incorporated, and diluted in ſo pleaſant a Vehicle, they become thereby, as they paſs the Circulation, ſo much the more capable of doing their Miſchief to the inmoſt and fineſt nervous Receſſes, even to the Brain itſelf; ſo that we need not be ſurprized to ſee ſuch Numbers of brave, luſty young Men cut off, almoſt on the Spot, by it; others in high Fevers, delirious or raving mad; ſome in violent Fits of the Cholic or Gravel; others labouring under the Torture of the Stone, Gout, or Rheumatiſm; ſome afflicted with Dropſies or Jaundice, whilſt others, again, fall into Conſumptions, Aſthmas, Paralytic and other Diſorders; and thus frequently cut the

Thread of Life ſhort, by indulging themſelves in the Uſe of ſuch poiſonous Drinks; and to think that Age or Maturation in the Veſſel will free it from ſuch a pernicious, yeaſty Tincture, is all a Jeſt, any more than if one had loaded it with as much Salts of Quick-Lime; for the one will fine as well as the other, but every Drop of the Liquor will always partake of them; and it is obvious, that were we only to put common Salt into Drink, it would retain it even to the laſt.

But when I conſider that, to all this heterogeneous Procedure in the Management of our Malt Liquors, there is ſtill ſuperadded the very Quinteſſence of the Refuſe and excrementitious, dirty Part of other former brewed Drinks, as in the Caſe above-mentioned, it fills me at once with Aſtoniſhment and Abhorrence, that People can be guilty of ſuch deteſtable Practices againſt their Fellow Creatures; but ſo it is, that moſt of our Brewers and Ale-Drapers care not what horid Stuff they prepare and vend, ſo that they can but fill their Pockets by it: Methinks it calls almoſt as loudly for a Law to prohibit the Making and Selling ſuch pernicious Malt Liquors, as it did for that of diſtilled ſpirituous ones; but, leſt I prove tedious on a Subject you are already ſo well acquainted with, I muſt beg Leave, Sir, to ſubſcribe, *&c.*

Darby, Jan. 31, 1739-40.

The Yorkſhire *Way of Brewing a Barrel of Oat-Ale.*

AT a certain Market-Town, twelve Miles from *Oaſley-Bay*, in this County, they make this wholeſome and pleaſant Liquor in its utmoſt Perfection, by grinding a Quarter of Oat-Malt, made with the white Sort and dried with Coak (any other Fuel will not ſuit it ſo well) and maſhing it with forty-four Gallons of cold, ſoft Water; they let it ſtand twelve Hours, then ſpend away in a fine ſmall Stream, and put two Pounds of fine pale Hops, well rubbed between the Hands, into it; let it infuſe cold for three Hours, then ſtrain and ton it, putting Yeaſt to it, and it will work briſkly for about two Days; then ſtop it up, and in ten Days Time

Time it will be fit to bottle. It drinks very ſmooth, briſk, and pleaſant, and looks like white Wine, but will not keep ſound longer than five or ſix Weeks: But, for longer Keeping, they ſometimes brew it as other Malt. They ſupply ſome of the great Taverns and Eating Houſes in *London* with it, who commonly charge Six-Pence or Eight-Pence a Bottle for it, but in the Country it is ſold for Four-Pence.

The Nottingham *Way of giving a Hogſhead of Ale an agreeable Reliſh, and cauſing it to ſparkle and knit in the Glaſs like bottled Cyder.* At this Place they uſually allow eight Buſhels of pale Malt to the Hogſhead for their common Draught Ale, which they ſell for Three-Pence a Quart; and twelve Buſhels to the ſame Quantity for their *October* or Four-Penny Beer. To the former, as ſoon as it has done working, they conſtantly put in the following Compoſition, *viz.* Work up as much Wheat Flour as three or four Yolks of Eggs will take up, with an Ounce of Ginger in Powder, into a ſtiff Paſte, out of which form two or three Balls: In about three Weeks Time they tap it, when it will have all the Properties aforeſaid, and hold it to the laſt; and this is ſo much in Requeſt here, that they will not drink any Ale, unleſs it ſtand this Teſt.

To forward the Working of a Guile of ſtrong Drink, of three Barrels or more, when checked by Cold. FIRST, try what Effect the putting a Firkin, filled with boiling Water and well bunged, into it will have; if this does not ſucceed, then take Quick-Lime powdered one Pound, of *Liſbon* Sugar one Pound, made into a Syrup with ſome of the ſame new Drink: Wheat Flouer and Bean Flouer (both malted, if you can) of each half a Pound: Salt of Tartar one Ounce: Ginger and Grains of Paradiſe each half an Ounce, with the Whites of five or ſix Eggs well whiſked, and the Syrup. Make the Whole up into Paſte, which immediately diſſolves in a Pailful or two of the ſame Drink, adding a little freſh Yeaſt to this Quantity, and ſtirring it well together; let it ſtand covered, pretty near

the Fire in a Veſſel that will hold as much again, for about five or ſix Hours; then mix it thoroughly with the Whole till it froths high; cover it up warm, and, I am told, it will anſwer your Expectation, even in the ſevereſt Froſt.

How a certain Innkeeper brewed and managed his But Beer. THIS Perſon in a City, a conſiderable Diſtance from *London*, ſold great Quantities of a But brown Beer, which had ſuch a Name, that, on a Stranger's aſking where the beſt Beer was ſold, he was directed to his Houſe. He uſed two Coppers and two Maſh-Tons at a Time, always mixed a little pale Malt with his brown, and was brewing from *Monday* to *Friday* only two Buts of Beer; becauſe he muſt have Time to perform the grand Operation of beating in the Yeaſt to the Drink; and, as often as it worked too rank, he ſkimmed it. Yet he was not ſo guilty of this male Practice, as I knew a certain petty pale Ale Brewer, who, to work and beat the Yeaſt into his pale Ale enough, had high Side-Boards fixed round his Tun, to prevent, in caſe the Man was ſurpriſed by Sleep, the yeaſty Head from working over: At laſt he ſkimmed ſo much off, that, when the Drink was put into the Caſk, the Ale could but juſt work enough to ſave itſelf. However this brown Beer Brewer was in the End brought to believe, that boiling Hops only thirty Minutes gave the Drink a vaſt Improvement, and therefore he was reſolved to have an Iron Hoop made, the Breadth of the Inſide of his Copper, for a Net with very ſmall Meſhes to be faſtened to it, in order to take the Hops out at Pleaſure, though each of his Coppers would hold four Barrels. But there was no perſuading him to leave off beating in the Yeaſt, becauſe this dearly beloved Way was too gainful to be laid aſide. And as to the Management of his But Beer in the Cellar, he left the Bung open moſt of the firſt Summer to keep the Drink from fretting, till it had a ſecond Working in the Caſk and then would cover or bung with a Piece of brown Paper

Paper paſted down, and ſo let it remain till he tapped it, and then he bung'd down with a Cork or wooden Stopple.

To fine Drink, and preſerve it ſound in the Caſk. If you would ſecure a But of Beer from ſtaling too ſoon, and give it a fine Flavour and Body, take a very ſmall meſhed Net, and put into it ſuch a Quantity of new Hops, as you think proper; in this put in likewiſe a Stone to ſink it to the Bottom of the Caſk, and at ſix Months End tap it. But if you would tap a But of Beer quickly, and ſecure the Drink ſound to the laſt, then put a Parcel of uſed Hops into, or without a Net, in the Veſſel; that is, ſuch Hops as have been only boiled a little while in a firſt Wort.

A Way to have Liquor little inferior to Claret, and yet pay but the common Exciſe of Beer or Ale. This Liquor was, for many Years, brewed by the late Dr. *Brabbin*, Miniſter of *St. Mary-Ax*, *London*, at his Houſe at *Barkhamſtead*, where it has often been preferred to Claret by his great Viſiters, the firſt Sort of Gentry: To this Purpoſe he always got the largeſt Sort of Berries, by intirely lopping the Heads of ſeveral of his Elder Trees in one Year; which would ſhoot again the firſt Summer, and the ſecond Summer would bear a very large Berry: Or, when he did not take this Method, he made uſe of another that was but little inferior to it, which was; that about *Chriſtmaſs* he would prune every Year the old Wood out of a Tree, and leave in it only the laſt Year's Shoots for bearing, and top to four Buds. Then for his Manner of brewing this excellent Liquor, and managing it afterwards in the Cellar, he did as follows, *viz.* He took twenty Buſhels of the beſt brown Malt he could buy, with which his conſtant Way was, to make one Hogſhead of ſtout Beer, one of Ale, and two of ſmall Beer. Out of this he took half a Hogshead of the firſt Wort or Running, and boiled half a Buſhel of pick'd red Elder Berries, full ripe; and boiled them with freſh Hops: Or elſe worked the new

Drink with Hops in it. This he would let ſtand a Year in the Caſk, and then he bottled it off with a little Loaf Sugar in each Bottle; and many have declared, they eſteemed it better than Claret.

To brew a Liquor in Imitation of true Brunſwick *Mum, according to Mr.* Nott's *Way*, viz. TAKE thirty-two Gallons of Water, boil it till a third Part is waſted, which, with more, brew according to Art, with three Buſhels and a half of brown Malt, half a Buſhel of dried ground Beans, and half a Buſhel of Oatmeal: When the Whole is done, put it into your Caſk, but do not fill it too full; and when it begins to work, put in a Pound and a half of the inner Rind of Fir, and half a Pound of the Tops of Fir and Birch. Inſtead of theſe, in *England*, they uſe Cardamum, Saſſafras, and Ginger, and the Rind of Walnut-tree, Elecampane Root, and red Saunders. Others uſe different Ingredients from theſe; however they are to be put in when the Liquor has worked a while, and, after they are in, let the Liquor work over as little as you can; when the Ferment is over, fill up the Caſk, and put into it five whole new laid Eggs, not broken or cracked, and in two Years Time it will be fit to drink.

To make Scurvy-Graſs Ale. TAKE four Ounces of *Alexandrian* Sena freed from the Stalks; Rhubarb ſliced one Ounce; *Winter*'s Cinnamon three Ounces; Polypody of the Oak one Ounce and a half; Bay and Juniper Berries, Anniſe and Fennel Seeds bruiſed, of each one Ounce; Liquorice and Horſe Radiſh ſliced, of each one Ounce and a half, and half a Dozen *Seville* Oranges. Cut the Oranges in Pieces, and put all the Ingredients into a Bag, with a Stone in it to make it ſink, into three Gallons of Ale; take a Pint and half of the Juice of Garden-Scurvy Graſs, ſet it over the Fire and clarify it, let it ſtand till cold, and then put it into the Ale: After it has worked altogether for a Day and a Night, ſtop up the Veſſel cloſe, and when it has ſtood ſix Days, drink a Pint warm, faſting: When the Veſſel is out, if you put in more Juice of Scurvy-

Scurvy-Graſs and more Oranges, you may fill it up with Ale a ſecond Time.

For Fining, Reliſhing, and Increaſing the Strength of amber But Beer. Take one Gallon of Wheat Flour, ſix Pound of Moloſſes, four Pound of *Malaga* Raiſins, one Gallon of Malt Spirit, free of any burnt or other ill Tang, and two ſmall Handfuls of Salt. Make all up into Dumplins, and put them into the Bung-hole of the Caſk or But. It will cauſe a Fermentation, therefore do not ſtop up too ſoon.

To cure a But of ropy Beer. Mix two Handfuls of Bean Flour with one Handful of Salt, and it will cut and cure a But of ropy Beer.

To feed a But of Beer. Bake a Rye Loaf, well nutmegg'd, of Two-pence Price, and put this in Pieces into a Bag of Hops, with ſome Wheat, into the Caſk.

Muſty Drink cured. Run it through ſome Hops that have been boiling in ſtrong Wort, and afterwards work it with two Parts new Drink, to one of the muſty old; this is called *Vamping*, and is a good Cure for muſty, fox'd, or ſtinking Beer.

To feed and give a fine Flavour to a Barrel of Beer. Put ſix Sea-Biſkets into a Bag of Hops, and put all into the Caſk.

To fine Drink in twenty-four Hours Time. An Inn-keeper, to do this, uſed to put in a Piece of Lime, made from ſome ſoft, not hard, Chalk, about the Bigneſs of two Hen Eggs, which will diſturb the Liquor, and cauſe it afterwards to be fine, and draw off briſk to the laſt, though flat before; this will do for a Kilderkin.

Another to cure ropy Beer. Take thoſe Hops that have been well infuſed, or ſtewed on Purpoſe in a blind Head two Hours, and mix them with the Wort they were ſtewed in, and ſome Settlings of ſtrong Wort, ſtirring the whole well together, and it will anſwer.

A third Way to cure a But of fox'd, or ropy Drink.

Beat

BEAT an Ounce of Allum very fine and mix it with two Handfuls of Horſe-Bean Flour.

To fine and feed But Beer. CUT Iſinglaſs into ſmall Pieces and ſoak it in ſome ſtale Beer, then boil Sugar in ſmall, or Ale, to a thin Syrup, and mix it with ſome of the Iſinglaſs Beer, which put into a But of Beer, ſtirring it briſkly together, and it will fine and preſerve the Drink well.

To fine a But of Beer. TAKE a ſufficient Quantity of River Sand waſhed clean, and not dry Pit Sand, and put it into the But of Beer; but if you uſe the dry Sort in Summer, it will make the Drink fret and fume at the Bung, and endanger the Head of the Caſk.

To recover a Kilderkin of ſtale ſmall Beer. A PERSON had a Kilderkin of Table Beer got ſo ſtale in a Fortnight's Time that it became a little crabbed; I adviſed him to put two Ounces of good Hops and one Pound of mellow, fat Chalk, broke into about ſix Pieces, into the Bung-hole, and immediately ſtop up cloſe. In three Days Time after he tapped it, and it proved a ſound, pleaſant Drink to the laſt.

To fine a Kilderkin of Ale or Beer in a little Time, and preſerve the ſame ſound and pleaſant a long Time. THE following Receipt I came by from the common Practice of a Country Victualler, who uſed it for many Years, with Succeſs, to fine, recover, and preſerve his Ale and Beer in a clear, ſound, and pleaſant Condition to the laſt: And which Receipt may ſerve to ſupply the Want of Time, Skill, Conveniency, and Ability for making the fore-mentioned Balls. Take a large Handful of Hops, boiled in a firſt Wort, only half an Hour, and dried; half a Pound of Loaf Sugar, diſſolved in the Ale or Beer; one Pound of Chalk broke into ſix Pieces, the white Part of Oyſter Shells, calcined in a clear Charcoal Fire to a Whiteneſs, and the Stems of Tobacco Pipes, that have been uſed and burnt again, of each, in Powder, four Ounces. Put in your Hops firſt, with the Pieces of Chalk, and then

then mix your two Powders and Loaf Sugar, in ſome of the Ale or Beer, and pour all in immediately after the Hops and Chalk, ſtirring them well about with a Staff, and bung down. Some will put theſe into Ale quickly after it has done working: Others will rack off their *October* or *March* Beer into another Caſk, and then put in theſe Ingredients, ſtirring all well in with a Staff: Or, if you can fix a wooden Bung well in, give the Veſſel a Roll or two on the Stilling, that the Bottom may juſt be turned upwards, and tap it at a Week's End, if you pleaſe. By this you will have a clear, wholeſome Ale or Beer. Others, that are in Haſte, will only make uſe of two Ounces of freſh, dry Hops, the Chalk, Tobacco-pipe Powder, and no Sugar, and it will prove ſerviceable; but, if it be done with freſh Hops, they muſt be put into a Net or Bag, with a ſmall Stone in it to ſink them; otherwiſe, if they are put in looſe, they will ſwim at Top, and do little, or no Good.

CHAP. VII.

Of Brewing Malt Liquors *by private Perſons.*

THE Character of a Gentleman's private Brew-houſe, and his Management in the ſame.—THIS Gentleman, an intire Stranger, by a Letter, deſired me to call on him, when next in Town; for that he had bought ſeveral of my *Brewing* Books, compleated a little Brew-houſe, and got good Store of Liquors by him, but was at a Loſs to make the Balls I had preſcribed in my *Supplement*; therefore would have a Parcel made to keep by him ready for Uſe: Accordingly I waited on him, and muſt own I was never better pleaſed with the Sight of ingenious Contrivances, under Ground, for Brewing and Preſerving Malt Liquors, than I was with thoſe of his, which I am going to deſcribe, as follows, *viz.*

His

His Liquor or Water,— Is of two Sorts, Spring and New River. The firſt is raiſed by a Pump of Lead erected in the Cellar-Room, where his Copper ſtands; and though it comes from a Spring in a Gravel, it is ſoft enough to ſerve alone in many Caſes; but that he might be compleatly furniſhed with this principal Ingredient, he has the New River Water laid in ſo convenient that it runs through a leaden Pipe into the Copper. By theſe, he can uſe a Liquor according to the Nature of his Malt with very little Trouble; for the Spring Water is pumped into his Copper by a Gutter, and the other runs into it by the Turn of a Braſs Cock; ſo that, if he brews a brown Malt, here is a ſoft River Water, proper to blunt its fiery Particles, melt its hard burnt Meal, and waſh it out into an oily wholeſome Wort, as the beſt Sort for the phlegmatic Conſtitution. Or, according to Dr. *Quincy*: He ſays, that Rain, or River ſoft Waters, ſeem moſt ſuited to draw out the Subſtance of high dried Malts, which retain many igneous Particles in their Contexture, and are therefore beſt loſt in a ſmooth Vehicle. If he brews a pale Malt, he can uſe his Spring harder Water, proper to melt and waſh out the tough oily Meal from ſuch a ſlack dried Body, becauſe the mineral Particles, with which this Water is impregnated, will help to prevent the Coheſions of thoſe drawn from the Grain, and enable them to paſs, as the Doctor ſays, the proper Secretions the better; as the viſcid Particles of the Grain will likewiſe defend them from doing the Miſchief, which otherwiſe they might occaſion. But, as both brown and pale Malts are dried in Extreams, this Gentleman, very prudently, for the moſt Part, makes uſe only of the amber Sort, as that which retains a mediocrity Quality, and is therefore the moſt agreeable to the Conſtitutions and Palates of Mankind in general. And it is for this Reaſon, that he mixes half Spring and half New River Water together throughout all his Brewing.

His Malt,— As I ſaid, is of the amber Sort, partaking

taking both of the Nature of the brown and the pale Sort, by being leiſurely dried all alike, and criſped with that excellent Fuel Coak, into a true Temper; and, if afterwards rightly made uſe of, it renders it the very beſt Sort of any, for making either *October* or *March* Beer, or a fine Straw-coloured ſmooth pleaſant Ale. For this Purpoſe, it is, that all Buyers of this Malt ought to be very nice in their Inſpection and Trial of it, as, *Firſt*, Whether it ſmells free of all Sulphur and Smoke. *Secondly*, If it has been kept clear from the venomous Bite of the poiſonous Wevil, which always begins his Eating Miſchief at one End of the Corn's Body. *Thirdly*, If of a right Colour, which may be eaſily known by chewing a little of it, and afterwards by ſqueezing out its Juice between the Thumb and two Fingers. *Fourthly*, Whether its Grains are all near of a Bigneſs and bite alike in the Mouth, for then they are moſt likely to prove good Malt; for when Barley comes up together, and is near all of a Ripeneſs at Mowing Time, it is then a right Sort. But when either ſeveral Crops of Barley are mixed by the Maltſter, or when a Crop of Barley is of different Ripeneſſes at Harveſt, it commonly makes a bad Malt; for then ſome Kernels will be ſoft and ſome hard, ſome all Malt and ſome half Malt and half Barley to the Deceiving of the Brewer's and Cuſtomers Expectation. Moſt or all of theſe Items were never publiſhed by any Author hitherto, though they are the moſt neceſſary Articles belonging to all Brewers to know: For if they have not a right Malt, I am ſure they can't have good Drink. But this is not ſo much to be wondered at, becauſe not only Brewers, but even Maltſters and Farmers in general are ignorant of this important Matter, nor when they would be ſenſible of it I know not, had not Mr. *Ellis*, a Farmer of *Little Gaddeſden* near *Hempſtead* in *Hertfordſhire*, publiſhed the Secret in one of his Books of Huſbandry how to prevent the Misfortune, by making known a cheap Ingredient of but Six-pence Value, that is firſt to be diſſolved in a Tub of Water, wherein

wherein three or four Buſhels of Barley-ſeed are to be ſoaked a Day and Night, and then taken out and limed as they do Wheat for ſowing this Quantity on one Acre, which cauſes the Seed to ſhoot in a little Time, in the drieſt Seaſon, fertiliſes the Crop, keeps off the Worm, and only by the Help of Dews carries it forward and cauſes it to grow in an even Crop. Whereas, in the common Way of ſowing Barley dry and naked, if a dry Summer ſucceeds its Sowing, there commonly are two or three Ripeneſſes of the Barley at Harveſt. That which the Harrows laid deepeſt in the Earth, comes up firſt; that which lies next follows, and the uppermoſt Seed lateſt of all; ſo that, at Mowing Time, one Part of the Barley Crop is ripe, another half ripe, and the other green. It is true, indeed, that ſuch Barley will make a Sort of Hodge-podge Malt that may take in an ignorant Buyer, but if it was put to a righter Uſe, it ſhould be given to Hogs, inſtead of brewing Drink with it. I could much enlarge upon this Subject; but I hope what I have here wrote will be ſufficient to all my Readers, to warn them againſt being impoſed on by ſuch bad Malt.

His Copper,—Is placed at one Corner of a Room in a Cellar about thirty Feet ſquare, ſo near the main Chimney that the Smoke of the Copper Fire aſcends through it; and, as it is paved with Free-ſtone in a ſmall Deſcent, it carries off all Waters into the common Shore. His Copper holds a Hogſhead, but without a Copp r Arm fixed in it, becauſe there is not room to fix it high enough, to let out hot Water or Wort by it into the Maſh-Ton or Coolers. To ſupply this Defect, he has a very ſmall Copper Pump faſtened to the Inſide of the Copper, that conveys firſt the hot Water to the Malt, and afterwards the Wort, by a higher Noſſel, through a Gutter, into the Backs or Coolers, for which Purpoſe he burns *Newcaſtle* Coal in an Iron Grate.

His Maſh-Ton,—Is made of the round Form, and roomly enough to maſh a Quarter of Malt, which is

his

his common Quantity for making a Barrel of ſtrong Beer containing thirty-two or thirty-ſix Gallons. This he the more conveniently performs, by having a falſe Bottom lying on a fixed one, which ſerves as a Strainer to the Wort from the Malt, when it is let out into the Receivoir or under Back by a Cock, and from thence thrown up by a ſmall Pump into the Copper.

His under Back, or Receivoir.—This moveable Utenſil is placed under his Maſh-Ton, to give the Brewer the better Opportunity to move about half Way round it with his Maſhing Oar; for as this ſtands under the Maſh-Ton, and one Part of it cloſe to a Wall, he cannot have more Room. This under Back is lined with milled Sheet Lead, of, I ſuppoſe, about four Pound to the Foot, all over its Bottom and Sides, which cauſes it to cool the Wort with Expedition, defend it far better than bare Wood againſt Taints and Foxing, and is eaſily cleaned and kept from Fur and Dirt; a Conveniency that all private Brewers, eſpecially, ſhould never be without, if their Pockets can afford it.

His conveying Gutter.—This ſerves for two Uſes, one to convey Water into his Copper from his Spring Pump, and the other to convey his Wort out of the Copper into his Coolers or Backs; is about five Inches ſquare, lined throughout its Inſide with milled Sheet Lead, and ſtands fixed cloſe to a Wall ſix Inches under a Cieling, and is covered with a looſe thin Slip of Board, when in Diſuſe, to keep out all Duſt and Sullidge.

His cooling Backs,—Are two in Number, placed cloſe to a Wall, are made both of a Size, containing ten Feet in Length, and five in Breadth. The lowermoſt ſtands two Feet from the Ground, and the other exactly over that at two Feet Diſtance, both lined with mill'd Sheet Lead all over their Inſides, to give them the great Benefits of a quick Cooling, conſtant Sweetneſs, and an eaſy Cleaning. Now, into theſe Coolers the Wort runs always fine, becauſe the Hops are boiled in a Bag made of Straining Cloth, ſuch as Dairy-women uſe to paſs their Milk through.

His

His working Ton.— THIS ſtands at a Diſtance from his Coolers, but ſo that the Wort may run out of them by a Cock into a ſquare wooden Ton, that is all lined with Sheet mill'd Lead. For as this Gentleman has Cellars and Vaults one deeper than another, his working Ton is ſo placed, that it ſtands lower than the Floor of his Brewing Cellar, where, by a Cock fixed in it, he lets out his new Drink, clear of the main *Fæces* or Sediments, and yet enough of them is conveyed with the Liquor by the pretty Contrivance of a leaden Pipe into his Caſk as they ſtand on a Stilling in a lower Vault, according to the *London* Brewer's Method, that is performed by a ſtarting Tub and leather Pipe, which carries the Beer out of it into a But in the Cellar.

His Caſks,—ARE of three Sorts, *viz.* the Half-Hogſhead, the Kilderkin, and the Firkin, which he has made in the moſt exact Manner that ever I ſaw. They are all Heart of *Norway* Oak and ſpoke-ſhaved within Side, which leaves the Staves ſo ſmooth, that Fur cannot make a Lodgment here, as in common Veſſels, that are left rough in their inſide Joints, for what the Eye never ſees, according to the old Saying, the Heart never rues. But this Gentleman is ſo nice a Perſon as to be at the Coſt of ornamenting the very Chines of his Caſk by a moulding Inſtrument, and ſecures all by ſtrong Iron Hoops, which, with the Veſſels, are painted all over with a bluiſh Colour; and, being kept in a dry Vault, will laſt many Years longer than in damp or clayey Cellars.

His Bungs,—ARE made of a turned Piece of Sallar, Aſh, or other light Wood, juſt fitted to the Bung-hole, about an Inch and a half within the Caſk and two without. In the Middle of this a ſmall Hole is bored for a Peg to remain in it, to give Vent at Diſcretion; and after the Bung is forced down by a Hammer with brown Paper, he cauſes ſome Clay, mixed with Bay Salt, to be worked round it, to ſecure the Liquor the better againſt the Admiſſion of Air, to keep it cool, and

better

better prevent prejudicial Fermentations by Change of Weather.

The Age of his Malt Liquor.—His ſtrong Amber Beer he keep a Year in the Caſk, then bottles it off, and begins to drink it at a Year's End afterwards, when he racks it off into a Decanter, which gives him an Opportunity to ſhew as fine a Glaſs of Beer as ever I ſaw or taſted.

The Improvement of my Balls to Malt Liquors.—But, notwithſtanding the Fineneſs and Palatableneſs of ſuch ſtrong old Beer, yet it is not free of ſome Acidity from the nature of the Hop, Yeaſt, and the Age of it; which, if drank in Exceſs, will be apt to breed the Gout, Rheumatiſm, Gravel, Stone, or other Diſorders in the Body. Therefore, to enjoy the Bleſſing without the Curſe, it will be great Prudence in all Lovers of *October*, to make Uſe of ſome Alcali, that may effectually ſheath the acrimonious Particles of ſuch ſharp Drink; which my Balls will do, and at the ſame Time fine, preſerve, and give ſuch Beer a pleaſant Farewell, if they are ſkilfully made according to my Receipt.

His Oeconomy in other Liquors.—But this Gentleman is ſo compleat an Artiſt, in the Management of Home-Brewed Liquors, that he furniſhes his ſeveral little Vaults and Cheſts, with great Numbers of Glaſs Bottles full of *Engliſh* Wine. I never drank ſo good Orange and white Currant Wines in all my Travels, for Strength, true Taſte of Fruit, and Pleaſantneſs. In ſhort, they were fully impregnated with the genuine dulco acid Taſte of the ingredients in ſo high a Manner that, in my humble Opinion, nothing can exceed them of the Kind: And that they may ſuit each Conſtitution, he has them made both ſtrong and ſmall; ſo that they muſt be moſt agreeable Liquors to both Sexes. And, as I am writing two Treatiſes on *Cyder*, I ſhall inſert the Making of ſeveral Sorts of rich *Britiſh* Wines, that they, who are deſirous, may know how to enjoy them in the cheapeſt, wholeſomeſt, and moſt pleaſant Manner.

Mr. Weller *at the Sign of the* Caſtle *at* Aſhford *in* Kent, *his Method of Brewing nine Hogsheads of ſtrong pale Beer, which he ſells for Four-pence a Quart, and two Hogsheads of ſmall.*—He had the thinneſt, lighteſt, and moſt palatable pale Beer that I met with at any public Houſe in *Kent*. Before he ſet up for himſelf, he uſed to get his Bread by Brewing for Gentlemen and others, and was much eſteemed. He uſed, for his pale Malt, that which was dried with Coak and *Welch* Coal mixed. As to his brown, it was Straw-dried. He brews three Days together, and wets about thirty Buſhels of Malt each Time. The firſt Day he puts over four Hogſheads of Water, which, though it is from a Well, yet readily lathers with Soap, juſt before it boils, upon thirty Buſhels, through a Trunk ſet upon a falſe Bottom full of Holes, allowing a Third for Waſte; then he maſhes and lets it only ſtand two Hours, ſpends away by a Stream about the Bigneſs of a Tobacco-Pipe Bowl, which takes about half an Hour in running off, pumps up this firſt Wort into the Copper, puts five Pounds of Hops, not rubbed, into it, and boils two Hours, or an Hour and a half at leaſt, ſtraining off his Hops through a Baſket, which he hoiſts up with a Pulley over his cooling Back to drain; then, directly he puts them into the Copper to his ſecond Wort, which was made by putting three Hogſheads, or hardly ſo much, upon the ſame Goods, and lets it ſtand the ſame Time; he boils this two or three Hours, by which Time, the firſt Wort is cooled, and lets this down fine into the working Ton, and his ſecond Wort in its Stead; then puts up three Hogſheads more of cold Liquor over his Goods, and lets it ſtand an Hour or an Hour and a half, draws it off, puts it into the Copper, makes it boil, and throws the Baſket of Hops to lie in it all Night. The ſecond Day in the Morning, he boils it again, and returns it on the twenty ſeven Buſhels of freſh Malt, allowing three Buſhels for the Return, heating another Copperful of Liquor, of which he puts over the ſame Goods one Hogſhead to compleat his Maſh;

Maſh; and for his ſecond Wort, *&c.* as he did the Day before.

Third Day.— He proceeds as before, and for ſmall Beer, at laſt, he does as for the returned Worts, only making what Quantity he pleaſes, and uſing as many of the laſt Hops as he thinks fit.

He cleanſes every other Day, by a leaden Pipe affixed to the Bottom of his working Ton, which paſſes all under Ground into his Veſſels in the Cellar, by the Help of three leaden Pipes, with Braſs Screws to fix to the End of it.

He lets the ſecond Wort lie in the Coolers all Night, and lets it down the next Morning to the firſt, which he had ſet to work the Night before, as ſoon as ever it was cool enough.

It works in the Veſſels for three Days, and he keeps filling up with what worked out, for he ſays it is the Bitter of the Beer that works out.

His Copper holds three Hogſheads. He lets off his Wort ſo fine from his Maſh Ton, that you may read a pretty large Print, looking through a Glaſs of it.

He ſtrains his Settlings from the Coolers through a Canvas, becauſe it ſtrains more expeditiouſly and waſhes better than Flannel; though I have been informed ſince by an ingenious Man, that a Sort of Cloth called *Drill* is far better than any Thing elſe, particularly Flannel, becauſe this laſt is oily, the other not, and it will run through much ſooner than Flannel, and as fine, by returning it once or twice.

He had but two Cool Backs, and no Cock or Arm to his Copper. Here they lay their Under Backs or Receivoirs of the Wort from the Maſh Ton, and their leaden Pipes in the Town, with an Earth called *Duff*, which is a Sort of blue Clay or Marle, dug two Miles from hence at *Kennington Lees*, and preſerves them for a hundred Years or more.

This Account was ſent to me, and contains ſome ſerviceable Matters in the Brewery, and ſome as bad:

But as I have taken Notice of ſeveral Errors committed in Brewing Malt Liquors, the Readers may judge of the right and the wrong.

A Chair-Woman's Summer Way of Brewing.——She put a Barrel Copper full of boiling Water into the Maſh-Tub, and added three Pails of cold. When clear ſhe ſtirred in the Malt by a Hand-bowl-full at a Time out of a Sack, while another maſhed all the Time; then ſhe capped with about a Buſhel of dry Malt, and let all ſtand covered two Hours. During this, ſhe heated a full Copper of Water, and, while the firſt Wort, was running off, ſhe put three Pails of boiling Water over the Goods to increaſe her Length of firſt Wort, and put as much cold into her Copper to ſupply their Place. Then ſhe drew off a full Copper of firſt Wort into Tubs, put all over her hot Water on her Goods to maſh up for a ſecond Wort, and her firſt Wort immediately after into the Copper with half a Pound of rubbed Hops, that ſhe boiled till the Wort broke into large Flakes, and then ſtrained all into Coolers.

When this was done, ſhe boiled a Copper of Water that ſhe put up, and maſhed with, on the Goods as ſoon as ſhe had drawn off her ſecond Wort, which ſhe boiled with only a Quarter of a Pound more of freſh Hops till it broke into ſmall Particles.

When the ſecond Wort was ſtrained off into Tubs, ſhe put in her third Wort and boiled it with the refuſe Hops one Hour.

While this was doing, ſhe maſhed her Grains up with a Kilderkin of cold Water, and boiled it to make up her Length; and thus ſhe made three Firkins of her firſt Wort, three Firkins of a ſecond Wort, and a Barrel of five Firkins of ſmall Beer from four Buſhels of Malt; to which ſhe uſed three Quarters of a Pound of Hops and no more, becauſe the Ale and ſmall Beer were to be tapped in a Week's Time, and all proved good, except her making Uſe of the Hops a ſecond Time. In this Management there was an abſolute Neceſſity to enjoy a quick Fire, becauſe, by this, the Malt, Goods,

and

and Grains were ſo quick employed, that they had no Time to ſour; for if it ſo happens, as it often does even in ſome great Brew-houſes, the Drink is incurable. Here her Fuel was dry ſmall Wood, which ſoon runs into a briſk Fire; and with this ſhe could keep a ſteady Heat, which enabled her to boil her Wort exactly right.

Some very nice Obſervations relating to the Running off Worts in the Maſh-Tub.— As to the firſt Wort, it is better let alone, than doing any Thing to it, while it is in the Maſh-Tub, for this will take no Harm, if the Liquor lies with the Malt two or three Hours. But, after the ſecond Maſhing, be ſure, at half an Hour's End, to turn the Cock, ſo that the Wort may run off as ſmall as a Straw for half an Hour, and then turn it faſter till all is run off. By this the ſecond Wort is ſecured from ſouring on the Grains, which is ſuch a Misfortune, when it happens, as can never, as I ſaid before, be cured; and this it is very apt to do in the Summer-time, becauſe the main or chief Heat of all the hot Liquor lies about the Cock-hole, as being the moſt deſcending Part or Center of the Maſh-Tub: Which Damage, I ſay, is prevented by the ſmall timely Straw Stream that I have mentioned, which keeps the Part cool by the continual Leaking.

The ill Effects of making the laſt ſmall Beer Wort ſerve inſtead of the firſt Water for the next Brewing.— This by many is practiſed, and thought to be a Piece of extraordinary Management; but if they conſider and are ſenſible, that the ſmalleſt and laſt Wort is that which has moſt of the terrene earthy Part of the Hop and Malt in it, I believe they won't be ſo fond of continuing this Method: And becauſe it is the Buſineſs of all nice Brewers to get and preſerve as much as may be the firſt floury Spirits of the Malt and Hops in their Wort, and leaſt of the naſty, dirty phlegmatic Parts of them, I had an Uncle, a common Brewer, in *London*, who for many Years valued his Art ſo much in brewing his ſmall Beer from intire freſh Malt, that

he publickly advertiſed it in Print, for he furniſhed it to great Numbers of Families, beſides ſelling ſometimes near thirty Barrels of it in a Morning, three Times a Week by the Gallon; it being ſo much approved of, that ſeveral capital Brewers, who lived near him, deſpaired of ſelling their ſmall Beer made from the Grains of ſtrong Beer and Ale, till his was all ſold.

Of Boiling Wort.— Mr. *Houghton* ſays, theſe Liquors altogether or ſeparate are boiled, that ſome Globules of the Water, which are yet lighter than the Parts of the Malt, may fly away, and ſo leave the reſt ſtronger, as having leſs Water to the more Malt; and alſo that, by the Violence of Boiling, the groſs Parts of the Malt may be further divided, and prepared for the next Fermentation, which will divide them ſo much as to make them lighter than the Water.

How ſmall Beer was ſpoiled.—A Country Victualler's Wife, who was born in *Nottinghamſhire*, and brewed her own Drink, wetted ten Buſhels of Malt for her common Ale Draught, and made, at the ſame time, half a Hogſhead of ſmall Beer on the Grains, which ſhe boiled, and ordered her Huſband to ſtrain or paſs it as it came out of the Copper on the Hops that were boiled with the ſtrong Wort, through a Sieve, to waſh out the Goodneſs remaining in them of the firſt Wort, and to tincture it with ſo much of the Bitter as it could thus get out of ſuch boiled Hops. But, inſtead of waſhing the Hops in this Manner, he, who knew little or nothing of Brewing, fell to ſqueezing the Hops, to get out, as he ſaid afterwards, all their Goodneſs; which, when the Woman underſtood it, ſhe cried out, he had ſpoiled the ſmall Beer: For indeed ſo he had; becauſe the Bitter, ſo ſqueezed out, was of ſuch an unwholeſome Nature, and unpleaſant earthy Taſte, that no body could drink the Beer, and therefore ſhe threw it into the Hog-Tub.

The ignorant Citizen. —— The above Account plainly diſcovers the Malignity of the earthy Part of the Hop, which, when forced out too much into the ſmall

ſmall Beer by boiling or ſqueezing, becomes rather a Vomit, than a healthful and pleaſant additional Tincture; which, one would think, ſhould be a ſufficient Item to the unwary Cits in particular, who, in the general, are the moſt unacquainted of any People with the Nature of Vegetable, not to make Uſe of ſmall Beer brewed with the refuſe Grains of ſtrong Beer or Ale, where that can be had, made from intire freſh Malt, becauſe the latter is wholeſome and pleaſant, when the former is impregnated with the two contrary Qualities: Such Drink, I ſay, is fitter to give Swine than to Chriſtians. This is, in a great Meaſure, proved by our Cows; for, if one of them is permitted to drink the Waſh of Grains for a Month or two together, it ſeldom fails of bringing the Beaſt under ſuch a ſcouring, as rots and carries them off, as ſome of our careleſs Farmers too often find true by woeful Experience.

To brew an excellent vinous Ale or Beer.—THIS I firſt diſcovered by my Taſte, as it was brewed at a certain great Sea-port, where they are ſo celebrated for their excellent vinous Beer, that they have juſtly acquired a very great Reputation for it in *France* and in the *Weſt-Indies*. It may be made with two Parts Malt Wort, and one Part Raiſin Wine; and, to prevent too great a Loſs of its Spirits by Fermentation, it is beſt work'd only in the Barrel.

CHAP. VIII.

Of the Wire Malt Kiln.

THE Wire Malt Kiln.—— This Kiln, in ſome Places, is now become their common Kiln for drying Malt, and is made either with Iron or Braſs Wire, ſo cloſe that no Kernel can drop through, and yet ſo wide that the Heat has a very eaſy Acceſs to the Malt; and ſo quick does the Fire communicate its Power to the Malt, that, in two Hours and a half, they often

dry off a Kiln of brown Malt, by which it fully anſwers the Deſign of the Owner; that is, that the Kernels ſhould be ſo ſcorched on a ſudden as to blow up and diſtend their Skin till it is ready to burſt, and thereby cauſe them to deceive the Eye of the Buyer, in making them appear bigger than they really are; I mean, to make the Buyer believe there is ſuch a Quantity of Flour contained in the Grains of ſuch Malt, as indeed is not. A *London* Brewer having a Malt Kiln of his own at a certain Town, the Man he hired to make Malt blowed it up on this Wire Kiln according to the preſent Mode, and as he did from whence he came; but when the Brewer came to underſtand it, he forbad the like going on, for he very well knew the Evils attending it: That ſuch haſty Work embittered the Kernels, by ſcorching their Outſides, and cruſting their Flour almoſt like a burnt Toaſt of Bread, which cauſed the Malt to make leſs Drink, than that more leiſurely dried. On the contrary, a Quaker Maltſter of this Town was ſo careful in making a true, healthful, pleaſant pale Malt, that he was ſix and thirty Hours drying one Kiln of it with *Welch* Coal; but his careful Honeſty brought him under a Loſs, for he afterwards broke, by being obliged to ſell this delicate Malt at the ſame Price of others, that were dried in eight or twelve Hours Time at a much cheaper Rate. However, of late in ſome Towns, they don't dry their brown Malt quite ſo high coloured as formerly, nor do they make ſo much pale as formerly, but dry their Malt according to the *London* Brewers Approbation, who every Day find the Benefit of the amber Sort, anſwering their Purpoſe beyond all others.

CHAP.

CHAP. IX.

Of the Fuel *to dry* Malt, *of* Malt, *&c.*

THE Fuel *to dry* Malt *with.* — In this Town of ——— their common Fuel is Wood for brown Malt, and *Welch* Coal or Coak for pale Malt. Their Wood is Oak and Horn-beech, which they uſe both in Bruſh and Billet. If they uſe either of theſe Woods, they burn them the next Malt Seaſon after Felling; that is, if they fell at *Chriſtmaſs*, they begin to dry Malt with it next *Michaelmas*. The ſooner they begin, the ſtronger the Fire muſt be. Now they ſay, that ſuch greeniſh Wood is beyond old Wood for this Purpoſe, becauſe it burns ſtronger, drives off the Smoke quicker, gives a Gloſs to the Malt, and a paler Colour and briſker Taſte to the Drink; by Reaſon old Wood is longer burning, the Smoke weaker and ſtays the longer with the Malt. This Notion is contrary to the *Warminſter* Maltſters, as I have obſerved: Who ſay, if their Oaken Roots or Billets are ſeven Years old before Uſing, it is ſo much the better, by reaſon, the Sap being moſtly conſumed by Age, the Wood ſmoaks leſs and burns quicker than new Wood, whereby it occaſions the leſs Miſchief to the Malt. For making pale Malt, they burn more *Welch* Coal than Coak, becauſe they ſay it makes a ſtronger Fire, dries the Malt quicker, and makes it paler by its greater Quantity of Brimſtone *Effluvia*; but towards the latter Part of the Work, they add ſome Wood, that forces a quicker Fire to criſp the Kernel, and thereby ſave Fuel, Time, and Labour.

Drying Malt *with Fern at* N——n, *in* Bucks. —— Here the Maltſter ſays, the beſt Way, of all others, to make this ſtrong Fuel a mild, gentle, ſweet Sort is, to let ſuch Fern have a good Shower of Rain on it after it is cut or mowed down, if he ſtays two or three Weeks for it, and then make it like Hay till it is very dry

dry. By this, the Sap is waſhed out, which fits it for drying pale Malt as well and almoſt as ſweet as Wheat Straw; for it is the Sap that cauſes it to ſtink, burn and blaze moſt furiouſly, and thereby gives the Malt a high Colour and ugly Tang: But it is one of the worſt of Fuels, if it is got in wettiſh. He obſerves, to mow the Fern ſoon after it is turned brown, becauſe then the Sap will be waſted in it, and the leſs Sap the leſs Smoke, nor ſhould it lie too long on the Ground after Cutting. This Maltſter dries both pale and brown Malt with it, with the Help of a little Wheat Straw, that he burns the laſt half Hour, to take off any Tang the Fern may leave behind.

The Way of making Coak in Derbyſhire.—Here they ſet ſix or eight Waggon Loads of Coal in a pyramidical Heap, ſo that the great Coals ſtand on their Ends. If the Wind blows, there are ſet Fleaks to ſhelter the Heap, and then, in a Hole made at the Top, they throw in a Fire-ſhovel or two of Fire, which ſpreads and fires all. This burns and blazes till the Smoke and Flame ceaſe, and it is all of a red Fire; then he covers all the Heap with Duſt, and that Side firſt, which by the Help of the Wind burns moſt, or where the Fire breaks out, which immediately damps it, and makes them dead Coals, which thus ſtands till next Morning, according to their Occaſion; and then with a Rake like a Gardener's, with ſix or eight Tee h in it, he pulls them down round the Heap, and the Duſt falls to the Bottom, which is thrown up of a Heap to damp the next Heap. It is obſerved, that three hundred Weight of Coals make but a hundred of Coaks, and the lighter they are the better. If they are curiouſly burnt, they gingle like common Cinders, and a Sack of ſix Buſhels will weigh about one hundred Weight: But, in the Southern Parts of *England*, they generally make their Coak, by burning *Newcaſtle* Coals in an Oven, or in a Glaſs-houſe Furnace.

The Value of Coak.—It is a moſt ſweet Fuel for drying Malt, the pale Sort in particular; but is beſt made

made from the large Pit Coal, which has ſupplanted the Uſe of Straw Fuel; and, when it is made to Perfection, it is the moſt admired Sort of all others.

The Ipſwich *Way of drying* Malt.—Here they dry their pale Malt with Coak, and their brown with *Newcaſtle* Coal burnt in a Cockle-Oaſt, as being reckoned the beſt Way of all others; but when the Coak is under done, as it oftentimes is, it will caſt up a Smoke and damage the Malt. The *Welch* Coal, or Culm, is alſo liable to the ſame Fault; for, as this has ſometimes common Coal among it, it yields a Brimſtone Smoke, that gives ſuch a Tang to the Drink, as not to be free from it under nine or twelve Months. Here I drank ſome excellent But Beer of a deep amber Colour; and here I taſted ſome Six-penny ſtrong Ale, brewed at ſome Miles Diſtance from this Town, that was the moſt intolerably tinctured with beaten Yeaſt that ever I met with.

Mr. Houghton's *Obſervation of Malt-making.*—The Reaſon, he ſays, why *Derby* Malt does not make ſo ſtrong Ale as formerly, now they make the pale Sort, is becauſe they lay it too thin on the Floor to come, by which a great Deal is not malted, and the reſt only Barley turned. Now in *Hampſhire*, he ſays, the Barley, which is much ſmaller and thicker ſkinned, is laid thicker on the Floors, and conſequently heats, and all becomes rich Malt, and makes ſtronger Beer with the ſame Quantity.

The Oxforſhire *Way of Malting.*—Dr. *Plott*, ſays Mr. *Houghton*, in his Natural Hiſtory of *Oxforſhire*, tells us of Malt Kilns made with long Bricks much like thoſe in *Derbyſhire*. He ſays they have alſo about *Burford* made their Malt Kilns of Stone, of which he has given us a Deſcription in Words and on a Plate; this was invented by *Valentine Strong*, and with it they can dry three Times the Malt in the ſame Time, and with the ſame Fuel as they could before once; and he ſuppoſes the *Corniſh* Warming-Stone, or the *Spaniſh Rugzolas*, would do better yet.

How

How ſtraw dry'd brown Malt is damaged by the Fire.— They cram in their Wads of Wheat Straw, ſo as to ſcorch the Malt to that Degree by the exceſſive Heat of the Fire, that the very Tiles over the Kiln will ſometimes crack and fly as well as the Malt, whoſe Outſides will be ſcorched and blowed up like a Bladder: But indeed the fewer Hops will ſerve, becauſe the Outſide of the Kernels will be imbittered by the Fire and Smoke.

CHAP. X.

Of Water.

Of the Spirit of Water.—— This ſome Water abounds with more than others, as the Soils through which they paſs differ: So ſome Ground is naturally more fertile than others; for as the volatile Salt and Sulphur of the nitrous Particles of the Air by Dews, *&c.* which the Earth is watered with from the benign Hand of Providence, and afterwards by the Sun's Exhalations, is diveſted from the ſuperfluous Humidity, in order to leave it a more exalted ſpirituous vegetating Salt; I ſay according to the Proportion of this that the Earth is impregnated with, ſo does the Element, through which it percolates, partake more or leſs of a ſpirituous vivifying Quality, fitted as well for the better extracting and joining in Contact with the more ſpirituous fine flowery and better Parts of the Malt and Hops, as for the Conſervation and Support of the Finny Tribe or other *Animalcula* which we daily obſerve to receive their chief Nouriſhment from it. Water is preſerved by its natural Salts, and the Element of Air.

The Strength of Mancheſter *Water.*— Mr. *Houghton* ſays, that, at *Mancheſter* in *Lancaſhire*, better Ale can be made with ſix Buſhels of *Derby* Malt, than at *Derby* Town with eight Buſhels of the ſame Malt; and that becauſe the firſt has a ſtrong Lime-ſtone Water, which

which *Derbyſhire* has not, according to the Relation I have before given of *Elminſter* Water, in *Somerſetſhire*.

To preſerve Water ſweet.——WATER, if it ſtands ſtagnant for ſome Time, eſpecially when confined in cloſe Places, is apt to form a clammy ſlimy Subſtance, to change its Colour, Taſte, and Smell, and to become very nauſeous, as it gows more and more putrid: To prevent this Inconveniency as much as poſſible, great Care ſhould be taken to have the Receivoir very clean. If it be a Caſk that has had Wine, Beer, or Brandy in it, I am told the Water will ſtink ſo as never to come ſweet again while in the Caſk. The *Thames* and ſeveral other Waters will ſtink in ſeven or eight Days, and ſometimes ſooner, eſpecially in unſeaſoned Caſks, and come ſweet again; by Opening the Bung-holes, Waters often become ſweet in twenty-four Hours, and ſooner, when much ſhaken and poured to and fro. Water would ſtink more if the Bung-holes were not left partly open: But putrid Water, though nauſeous, is not obſerved to be hurtful to human Bodies. Dr. *Boerhaave* in his Chymiſtry, *Vol.* 1. *Page* 589, ſays that when Rain Water ſtinks, if it be juſt boiled, all the living Creatures in it will be killed, and, on ſtanding to ſettle a while, they will ſubſide with other Sediments to the Bottom: Then being acidulated with ſome pure acid Spirit, the Water is obſerved to become moſt wholeſome: And that by the ſame Means, *viz.* by adding a little Spirit of Vitriol, Water may be preſerved from putrifying or breeding Inſects, and yet be very healthful withal. But as he has not mentioned what Proportion of this acid Spirit ſhould be put in, and as a ſmall Error in Exceſs of the Quantity of this very acid Spirit may render it far from wholeſome, even very hurtful and noxious; I will, ſays Dr. *Stephen Hales*, give an Account of what Experiments and Obſervations I have made on this Subject, in endeavouring to preſerve the Virtue of Chalybeat Waters.

" I HAVE found, ſays he, that three Drops of Oil of Sulphur

" Sulphur, in a Wine Quart of Water, have preſerved " the Water from ſtinking for many Months, and even " two Drops to a Quart of pure Spring Water, which " came from a gravelly Soil, to be the pureſt of any " Spring Water, it being filtrated through the finer " Sand of that Gravel, which, conſiſting of innumerable " ſmall flinty Stones, gives no Tincture to the Water, " but purifies it as it glides through its fine Meanders. " Snow and Hail Waters are the pureſt of any: But " Rain Water abounding with Sulphur, eſpecially in " hot Weather, is apt to putrify; the purer the Water, " ſo much the leſſer Quantity of acid Spirit will pre- " ſerve it. I have, continues he, from my own Experi- " ence, and that of others, known Steel Waters drank " with three Drops of Oil of Sulphur to a Wine Quart, " not only with much Safety, but with great Benefit, " when drank only in the Quantity of a Quart, a " Pint, or Pint and a Half in a Morning, for a few " Weeks, and for a much longer Continuance in the " ſmall Quantity of Half, or a Quarter of a Pint." *In the Hiſtory of the Academy of Sciences, Anno* 1722, it is ſaid, " That freſh Water has been preſerved from " putrifying or breeding Inſects for ſix Weeks, by fu- " ming the Caſk with burning Brimſtone, as is fre- " quently done to preſerve Wine and Cyder; and, if " when a few Gallons of Water are put into the fumed " Caſk the Bung be put in, and it be rolled to and " fro, this will make the Fumes more effectually in- " corporate with the Water, as it does by the ſame " Means with Wine and Cyder. I am informed that " the *Dutch* in long Voyages, to prevent the Water " from ſtinking, always put into it, before they ſet out, " a Quantity of Spirit of Vitriol, which is proper for " Seamen in hot Countries, by hindering a too great " Perſpiration." —— It is ſuppoſed there are not many conſumptive Men in a Ship, for whom Mineral or other Acids are not good.

To make Sea Water freſh for Brewing.—THIS Art is now brought to ſuch Perfection by that admirable Virtuoſo

tuoſo Dr. *Hales*, that fifteen Gallons of good freſh Water may be produced, by a Still and Worm, from thirty Gallons of ſalt Water, in ſeven Hours Time, and that by uſing only half a Buſhel of *Newcaſtle* Coals; but, in a larger Still and Worm, more may be diſtilled in equal Times with leſs Fuel in Proportion to the Quantity diſtilled: That he is informed that Wood Fuel is chiefly uſed in Ships, which, in many Parts abroad, coſts nothing but the Labour of Cutting and Fetching. A greater Bulk of this will be wanting to diſtil the like Quantity. Coals might well be laid in Ballaſt in a little Compaſs, but when Ships are full freighted, they have little or no Ballaſt, which is then not to be come at. But might it not be adviſeable, ſays he, in ſome Kinds of Voyages, by Way of Precaution, to have a Ton or other Quantity of Coals in ſome proper Place, when it would take up but little uſeful Room, eſpecially ſince ſo many Tons of Water may be diſtilled with one Ton of Coals; and to prevent any Damage from Fire, a Quantity of Salt may be laid on the Planks, about the Fire-Place: That for this Purpoſe the Ship-Boiler, when not uſed for Cookery, can be employed as a Still, by having a ſeparate Cover, which fits the Boiler with a cloſe Joining, for that, in the midſt of ſuch Cover, a Hole may be made of a true Proportion to the Size of the Boiler; to which Hole the Pewter Head of a Still is to be aptly fitted. But as there are ſeveral other Particulars belonging to this Operation, I refer the Reader to his Treatiſe, intitled, *Philoſophical Experiments*, printed in 1739. However, as this Gentleman's Ingenuity cannot be enough made known, in common Juſtice, I could not forbear publiſhing theſe Hints: And as it relates, in ſome Manner, to the Brewery, it engages my Pen to obſerve, that where freſh Water is ſcarce, as it is in many Places, which afford no other than the Rain produces from off the Roofs of Houſes, and where the Inhabitants live near the Sea Shore, great Quantities of good Water may be obtained

ed by ſuch Diſtillation from Salt Water; ſo that in any Iſland, Garriſon, or mountainous Place, where no Springs are to be found, they may by this Means have Water enough for Brewing or other Uſes, if they have Materials for diſtilling it: And I add, that it is my humble Opinion, in Caſe of Neceſſity, or where Beer is coveted, there may, by ſuch Plenty of good freſh Water, be a Beer made by only boiling Malt and Hops in ſuch Water in the Copper.

The Virtue of Water wherein Barley is ſoaked in the Ciſtern.— IN the Malſters Ciſtern where they ſhift their Water once or twice to ſoak and prepare Barley for making it into Malt: The Water by lying among this Grain a Day or two, becomes impregnated with a great Deal of the Virtue of this Corn, inſomuch that it will run off thick or ropy and very frothy, which diſcovers it to be endowed with a conſiderable Share of the Spirit and Subſtance of the Barley. Now this Liquor is ſeldom put to any other Uſe than to give it the Hogs or Waſh, and undoubtedly is very ſerviceable for that Purpoſe. But I am of Opinion (for I never knew it tried) that if the Body of this Liquor was diluted to a proper Thinneſs with common Water, it might be of Advantage to make Uſe of it as the firſt or ſecond Water or Liquor for Brewing, and thereby ſave Malt: For though ſome Maltſters I have converſed with own they never knew it uſed in this Manner; yet they confeſs they believe it to be of that Strength, which, if diſtilled, would yield a Quantity of Spirits. It would therefore undoubtedly be very much to the Intereſt of many, to uſe this Liquor or Water in Brewing, becauſe it would not only ſave one Buſhel of Malt in eight, but make the Drink ſo much the ſtronger. And that this may not ſeem improbable, let it be conſidered, that it is a ſtanding Rule with thoſe Brewers in *London* who make Uſe of *Thames* Water altogether, to allow the extraordinary Strength of that Water to one Buſhel of Malt in eight; on which Account they uſe only ſeven, where others do eight Buſhels of Malt, who brew with

Spring

Spring Water. And where ſuch Barley can be ſpared, let thy poor Neighbours be remembered, for if they knew the Value of it, they would eagerly deſire it, and make Uſe of it for Brewing, to ſave Malt.

CHAP. XI.

Of Miſcellaneous Matters relating to the Brewing, Working, and Adulterating Malt Liquors.

HOW a Gentleman's Servant damaged a Barrel of Ale and recovered it. — THIS Servant having an Aſſignation with a pretty Girl, and being obliged to ſet his Drink that Night, put Yeaſt to ſome of it too hot, which with the Heat of the Weather (it being then Summer Time) cauſed a violent Fermentation, which ſo diſſipated its Spirits, that, on pegging the Caſk about a Month after, he found it foul and a little pricked (though the next Veſſel which was Part of the ſame Brewing, but put together cool, was fine and in good drinkable Order); upon which he immediately got three Quarters of a Pound of Horſe-bean-flower, and one Pound of Raiſins of the Sun, ſtoned and chopped, then mixed all up into Balls with a little of the ſame Drink and put them into the Caſk, and bunged it up, leaving a Vent-Hole open; upon this enſued a freſh Fermentation, which diſcharging a pretty Deal of thick Yeaſt, the Liquor by this Means, in twenty-four Hours after, became fine and fit to drink, though it was defective as to its Body, therefore he the ſooner drew it off.

Working and Tonning Drink. — IT is not the firſt flaſhy frothy Yeaſt, that is an Indication of the Drink's being fit to ton or barrel up; for, if any ton it in this Condition, the Drink will not clear itſelf, nor be ſo briſk, as when ſuch frothy black bliſtery Head is firſt either ſtirred in, or ſkimmed off, and put into the ſmall

Beer, for this is only a bitter light Froth or Ferment that comes up before the curled Head appears, which is a Degree more ſolid than the firſt; yet even this is not the ſolid Head we want, but it is the next that follows this, which is, when the curled Head is a little broke into a thick creamy ſolid Yeaſt, then it is Time to ton the Beer. But here great Care ſhould be taken not to let ſuch ſolid Yeaſt work ſo long as to fall into the cloſeſt Sort of all; for, if ſuch Drink is worked too long, it will not work to any Purpoſe afterwards in the Caſk, but taſte inſipid, weak, and diſagreable, becauſe ſuch very high Working makes it loſe its Spirit and Strength, which is the chief Preſervation of the Liquor, and by which an Obſervation may be formed of the two Extreams in Working Malt Drinks. If it is not ſufficiently worked, the Beer cannot clear itſelf. If too much, it gets weak and ſoon ſours.

To take off the muſty Taſte of Beer or Ale occaſioned by the Veſſel. —This happens chiefly by a Perſon's having more Caſks than he can fill with Drink in due Time, and then it is that ſuch Caſks, notwithſtanding their being waſhed with hot Water, will grow furry, taint, and ſtinking, unleſs the Head is taken out and expoſed to the Air, as is, in the Summer Time eſpecially, practiſed by the *London* Brewer. In this Caſe, draw off your muſty Drink into a ſweet Caſk, and then immediately boil Half a Pound of Groat Sugar in a Quart of Water a Quarter of an Hour; then put it into a Hand-bowl or Pewter Baſon, and, before it is quite cold, add a large Spoonful or two of Yeaſt to it. This will cauſe it in Summer Time to ferment preſently, then pour it into the Veſſel. This Quantity is ſufficient for a Kilderkin or more.

To prevent Wort from foxing.— If the firſt or ſecond Wort is put into a deep Tub to a conſiderable Quantity, by Means of Perſons wanting Room, or a ſufficient Number of Tubs, then, to prevent ſuch deep lying Wort from foxing, ſtir it round with a Hand-bowl now

and

and then, while it is cooling; for, by this, the Air is let into the Liquor and the Heat let out. But, where ſuch Danger is, put a Quantity of Hops into it beſides, or diſperſe it into other Places: This will alſo help to prevent Foxing.

Why a large Caſk is beſt to hold Beer or Ale. — FIRE is cauſed by Motion, as likewiſe all Heat and Fermentation. Now the greater the Veſſel is, the more Parts may ariſe, and the more ſink down; and the more they do ſo, the more muſt be the Buſtle, eſpecially in high Caſks; for there every Bubble, that riſes from the Bottom to the Top, muſt rub through more Parts, which makes the greater Heat, the Liquor thinner, and the fine Parts more eaſily riſe, and the heavier more eaſily ſink down; clarifies it much better, and makes the fine Parts be more by themſelves without the groſs: An Excellency we deſire in all Drinks.

To ſtop Drink from fretting in the Ton. — SPRINKLE ſome fine Spring Water over it. It will help to prevent the Wort, while cooling, from fretting.

To ſtop Drink from fretting in the Veſſel. — MIX four Ounces of Sugar with a Handful of Salt and put it into a Hogſhead.

How to make common But-Beer Stout. — THIS has been practiſed by ſeveral Ale-houſe keepers, in the following Manner: — After the common Brewer has ſtarted his keeping brown But-Beer into Buts in the Victualler's Cellar, and it has there remained ſeveral Months on its natural Lees, the Victualler puts four Gallons of Moloſſes into one But, and with it the uſual Forcing or Fining, which he ſtirs all ſoundly about with a Hand-ſtaff. This he lets remain for a Week, and then with a Cane draws it off as long as it runs fine, which will be about half Way. The reſt is uſed to put into a Hogſhead as free from the groſs Lees as he could, for that is conſiderably thick and ſlimy. The firſt he bottled off and ſold it for Six-pence a Bottle, and, before this is expended, the laſt, in the Hogſhead, will be likewiſe fit to bottle. By this Me-

thod a Victualler increaſed the Strength of his Beer, without paying Exciſe for it, which gave him an Opportunity of acquiring an Eſtate: For the Beer, that he would otherwiſe ſell for Three-pence and Four-pence a Quart, he made Six-pence a Bottle ſometimes of; for, by giving it a due Age in the Caſk and Bottles, the Liquor loſt moſt of its Treacle Tang, and ſo well pleaſed his Cuſtomers, that it had a great Name ſome Time, inſomuch that he thought he had gained enough to leave off Buſineſs, and enjoy a retired Life. Then it was that he frankly diſcovered the Bite to the ſucceeding Tenant, who bought all his Stock, and gave a conſiderable Sum for the good Will of the Houſe beſides, and from whom I had this Account.

The ill Conſequence of drinking ſuch Moloſſes-Beer. — NOTWITHSTANDING this Moloſſes-Beer got a great Name by pleaſing many of the ignorant Town People, and even tempted the very Drawer to drink frequently of it, yet at laſt this Drawer found the ill Effect of it by woeful Experience; for, by drinking a whole Quart of it to his own Share in a very little Time, it preſently threw him into a violent Sweat, upon which directly enſued a great Cold and Hoarſeneſs that held him four Months, and had like to have killed him as he himſelf declared.

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F I N I S.

THE

INDEX.

A

ALE to turn into ſtale Beer Page 294
—— to recover a damaged Barrel of it 329
Apricot-ale to brew 193

B

Balls, to make, for fining Liquor 292
Barley, the Nature of it and Soil proper for it 1, 251
—— the Sate of it in 1737 172
Barnſtaple Way of Brewing 213
Bottling Malt Liquors 245
Brewery, a Diſſertation on it 139
Brewing, a Phyſician's Way, without boiling 150, 204
——— of the four Quarters of the Year as they relate to it 165
——— Miſcellaneous Matters relating to it 329
Brewing in general 19
——— *London* Way 22
Brewing ſtout But-Beer Page 22
——— Ale called *Stick* 23
——— Pale and Amber 24
——— Small Beer 24, 29
——— a Country Victualler's Way 137
——— the Country or private Way 25, 28, 267, 307
——— ſtrong October 30, 32, 271, 275
——— Moloſſes-Beer 31
——— the Pleaſure, Profit, and Expence 69
——— a Philoſophical Account of it 71
——— ſeveral Improvements in it 268
——— ſtrong Liquors, a new Method 198
——— the Summer Way 316
Brewing-tubs, to keep ſweet 233, 287
Brew-houſe, of the great one 179
——— the private one 183
Briſtol Ale and Beer to brew 264

Bridge-

Bridgewater Way of Brewing Page 266
Brunſwick-Mum, to brew a Liquor little inferior to it 304
But-Beer, or Porter, to brew 221, 276, 302
———, to fine 306

C

Caſks, of ſweetening and preſerving 61, 62, 63, 232
——, of burning and removing 64, 294
——, of ſhort-meaſured 157
——, to take off the muſty Taſte occaſioned thereby 330
——, why a large one is beſt to hold Beer or Ale 331
Carolina Way of brewing 137
Cellar, the proper Sort 58
Cellar-man, his Buſineſs 227
China-ale, to brew 191
Coak, the Way of making it 322
Cock-ale, to brew 194
Country-drinks, Obſervations on ſome 227
Cowſlip-ale, to brew 194

D

Devonſhire white Ale, to brew 195
Dorcheſter-beer, to brew 119

E

Egg-ale, to brew 193
Elderberry-ale, to brew 194
Elminſter Way of brewing Page 266

F

Family-ale, to brew 267, 275
Fermentation, to forward 217
———, to check 220
Fuels of ſeveral Sorts for drying of Malt 175

G

Grains of Paradiſe, its Virtues 287
Gout, to cure 226

H

Hops, their Nature 35
——, their good and bad Properties 100
——, the Infuſion of them 199, 201
Houghton (Mr.) his Obſervations on making Malt 323

L

Lees, artificial 52

M

Malt, of making and drying it 5, 253, 321, 323
——, of knowing good from bad 10, 253
——, of Pale, Amber, and Brown 11
——, of grinding 18
——, to prove its Goodneſs 287
——, of Errors and Abuſes in

in making it Page 87
Malt-kilns of ſeveral Sorts 173, 319
Malt Liquors, of boiling 39
———, of foxing or tainting 43, 228—232, 286
———, to cure 44, 106
———, of fermenting 45, 48, 51, 111
———, of beating in the Yeaſt 47
———, a Compoſition for feeding it 54, 305
———, to fine, 54, 56, 234—236, 240, 305
———, to ſtop the Fret 55, 235, 331
———, to preſerve fine and ſound 303
———, to recover, when deadiſh 55, 235
———, when ſtale 56
———, when cloudy 293, 241
———, when flat 235
———, when pricked, ſtale, or damaged 115—218, 234, 235, 294
———, when damaged by Froſt 219
———, when ropy 235, 286, 305
———, when muſty 237, 305
———, when decayed 238
———, of pernicious Ingredients to increaſe its Strength 56
———, of the proper Strength and Age 66
Malt Liquors, to preſerve for Exportation Page 237
———, of Vamping 238
———, of Racking them off 239
———, to prevent their Acidity 241
———, Cautions relating to them 243
———, of the Uſe of Eggſhells, Eggs, Crab-claws, Oyſter-ſhells, &c. 244
Moloſſes-beer, the ill Conſequence of drinking it 332

N

Noor (Sir *Jonas*) his Receipt for Brewing 274
Nottingham Way of brewing 32, 301
Norfolk Way of brewing 211, 263
Nott (Mr.) his Receipt for Brewing 272

O

Oat-ale, the *Yorkſhire* Way of brewing 300

P

Pale Ale and Beer, to brew 190, 191
Philadelphia Manner of brewing 135
Porter or But-Beer, to brew 221, 276, 302
———, to make it Stout 331
———, to fine 306
Purl, an Improvement of it 225

R

Rheumatiſm to cure Page 226
Rocheſter Way of brewing 264

S

Salt of Tartar, its Virtues 285
Scurvygraſs-ale, to brew 304
Sea-water, to make freſh for Brewing 326
Seabright (Sir *Thomas*) his Way of brewing 156
Sediments, their miſchievous Nature and Remedy 288
Shropſh. Way of brewing 130
Small Beer, to keep without Hops 237
———, to recover, when ſtale 306
———, how ſpoiled 316
Strong-beer, an Innkeeper's Way of brewing 186
———, a new Way of managing 238
Sweet-flag, its Virtues 287

W

Water, of ſeveral Sorts 14, 325
Water, its Properties in brewing Page 61
Welchwoman's Wey of brewing 265
Weavils, to deſtroy and prevent 223, 224, 259
Wheat-malt, of making it 93
———, of brewing it 96
Working, to forward 300
———, the new and old Way 214, 215, 294
———, and Tonning 329
Wort, its Improvement 206
——, prepared for Digeſtion 209
——, to ſave the Waſte 276
——, to prevent its Foxing 278, 330
——, to prevent its boiling over 287
——, of Boiling 318

Y

Yeaſt, of beating it in 279
——, its intoxicating Quality 280, 296
Yorkſhireman's Way of brewing without Malt, or paying Exciſe 212

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